[Q&A]

Compiled by Caitlin Cunningham

Laura Shenkar

A New Era Dawning

Changing the way we look at storm water

In light of the recent American Recovery and Reinvestment Act funding boost and ongoing work, Laura Shenkar of The Artemis Project—a firm specializing in the business of advanced water technology—discussed with *Storm Water Solutions* Managing Editor Caitlin Cunningham the water-energy-waste paradigm, infrastructure needs and wise spending in today's market.

Caitlin Cunningham: *What do you believe to be the most significant storm water challenges facing end-users today?*

Laura Shenkar: Where in the past there was an assumption that we had an unlimited supply of resources and cost-effective solutions for dumping things after we're done with them, we're coming into an era where all these are limited and there is an effort to become as efficient as possible.

In addition, it has become difficult to determine when and how water is going to arrive; there has been a dramatic increase in severe storms and unpredictable drought over the last few years, and that's expected to continue.

Finally, we have a dramatic decay in water infrastructure, where we begin to talk about "end-of-life" strategies. It's an era where we question where it makes sense to be using centralized infrastructure and where improving onsite solutions should be the focus.

Water doesn't need to be purified at a uniform level for all uses, and there's a lot of opportunity to use less-purified water. In a commercial environment, if you use an onsite system to reclaim what you have used in your operations, you can save between 50 percent and 80 percent of the site's drinking water. You can extend this operational independence from the grid by reprocessing rainwater, reclaiming it and using it in nonpotable systems.

How much energy do you save? In most of southern California, for example, you'd save 85 percent. Also, there are ways of collecting pollutants as water runs off parking lots and agricultural fields, for example, getting them out of the waste drain and putting them to beneficial use.

So we've got a paradigm between water, energy and waste use that really changes the rules of the game. Not only is that a great opportunity, it's going to be a requirement moving forward.

Cunningham: *The U.S. government recently allocated billions of dollars in stimulus funding to support water projects. Is this investment sufficient to help address this paradigm's challenges?*

Shenkar: Water infrastructure is a very small part of the stimulus package. They're talking about making bandage fixes to really crucial pieces of the central water infrastructure today, and there is no way this comes anywhere close to addressing what is needed in terms of pipes and basic infrastructure. In addition, there are big plans for developing new centralized water reuse capabilities; that's very exciting stuff, but then you need to put the proper piping in to deliver the water.

Cunningham: *How can funding recipients ensure that they get the most bang for their storm water buck?*

Shenkar: An interesting aspect of the stimulus package is that 20 percent of the funding is meant to be allocated toward "green," shovel-ready projects. Here you have an opportunity to get a dramatic increase in cost-effectiveness—not just in terms of waste disposal, energy savings and pollution prevention, but by using cheaper technologies. You can't compare the cost of onsite ultraviolet or sponge technology with that of building a new drainage system to take storm water and bring it back to a centralized sewage processing facility. SWS

Laura Shenkar is principal of The Artemis Project. Shenkar can be reached by e-mail at laura@theartemisproject.com.

Caitlin Cunningham is managing editor of *Storm Water Solutions*. Cunningham can be reached at 847.391.1025 or by e-mail at ccunningham@sgcmail.com.

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