

LOW-IMPACT

packs high-impact potential

The Port of Houston Authority (PHA) has been working to improve stormwater management for years. Now, it is collaborating with CLF Ventures, a non-profit affiliate of the environmental advocate Conservation Law Foundation (CLF) through a Performance Track Participants Association initiative to benchmark stormwater management progress and develop a strategy for the future.

Since 1966, CLF — one of New England's most influential environmental advocacy organizations — has championed environmental causes ranging from fighting against air and water pollution, to protection of marine habitats to public transportation reforms, the call for renewable energy and the protection of public health.

That fight has involved various tools from an arsenal that includes widespread media campaigns to lawsuit filings to litigation. Twelve years ago, CLF started taking a more proactive approach through its nonprofit affiliate CLF Ventures (CLFV).

CLFV works in concert with industry, creating strategic, economic and responsible blueprints for infrastructure development that is compliant with local, state and federal environmental regulations.

The Port of Houston Authority is tapping into CLFV resources to develop strategies that decrease the impact of stormwater on the Houston Ship Channel through the use of a program known as “low-impact development” or LID.

According to the Natural Resources Defense Council, LID strategies integrate green space, native landscaping, natural hydrologic functions, and various other techniques to generate less runoff from developed land. It has emerged as a highly effective and attractive approach to controlling stormwater pollution and protecting developing watersheds and already urbanized communities throughout the country.

Consider it a vital tool of “the next generation of environmentalism,” that CLFV Project Manager Jasmine Tanguay says her company was created to represent.

“We’re moving away from the litigious means of suing everybody to working with organizations toward a common goal,” Tanguay says. “We’ve found that many industries want to do business in an environmentally responsible way. They just need to be shown how.

“Low-impact development moves us away from the big concrete solutions to more natural ones,” she says. “Soil and wetlands can sometimes treat stormwater better than manmade systems. With the proper system, using natural filtration, nature works to eliminate pollutants.”

Last month, Tanguay, Jo Anne Shatkin and Tom Schueler, with the Chesapeake Stormwater Network, a subcontractor to CLFV, joined members of PHA's environmental affairs team on LID site assessments of the port authority's Turning Basin, Barbours Cut and Bayport terminals.

“Our job is to identify best management practices that are cost-effective and will still minimize environmental impacts,” Shatkin says. “Working in collaboration with these companies allows us the opportunity for a more strategic approach to the problem.”

Successful design, development and implementation of LID programs at these three PHA facilities can have measurable positive impacts on water quality in the adjacent waterways of the Houston Ship Channel and Galveston Bay, especially at Barbours Cut — the busiest



DEVELOPMENT

containerized cargo terminal on the U.S. Gulf Coast and at the Turning Basin, the oldest of PHA's facilities.

"One acre of impervious land can yield 64 TEUs (twenty-foot-equivalent units — a universally recognized measurement of container volume) of stormwater," says Schueler, who has earned international recognitions as an expert on stormwater management. "Because of the slope of the land and the sheer scale of these facilities, there is a lot of opportunity for the port to have spills that get into the channel. But, I have to give them (PHA) high marks for secondary containment.

"Clearly, a strong corporate commitment (to the environment) exists here, (at PHA)" Schueler says. "Commitment is not just a paper exercise to them."

Schueler admits that Houston's semi-tropical climate and flat terrain, along with the age of the Turning Basin and Barbours Cut facilities, present some unique challenges, but he considers none of them insurmountable.

"Yes, it rains here a lot and the humidity is a factor," says Schueler. "The flat terrain and the high water table present some interesting challenges. But, great partnerships recognize regional differences. The challenge is coming up with solutions on how to deal with those issues of climate and terrain. In order to be effective here, we have to take a broader 'watershed' approach to the issue."

While the LID project is still well within its exploratory phase at PHA, it is yet another example of the port authority's ambitious approach to expanding its environmental initiatives beyond the footprint of the terminals it operates. As it prepares to enter the second decade



of the 21st century, PHA is methodically expanding its environmental floor plan to include tenant sites and beyond, including outreach and information exchange to local municipalities.

"This (the LID project) gives us the opportunity to invite an environmental advocacy group in that will give us another perspective," says PHA Environmental Compliance Coordinator Nicole Hausler. "Historically, low-impact development has been focused on residential and municipal development. This is one of the first times it is being proposed in an industrial setting. It gives us another opportunity to go above and beyond.

"It's important for us to recognize that whatever impact our tenants have on stormwater runoff actually affects our (PHA's) permit," Hausler says. "So, educating those tenants and getting buy-in from them is very important."

Hausler estimates CLFV's initial report will be released by the end of the second quarter of 2009 and will be presented to PHA management by early third quarter of this year. ■



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