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WASHINGTON, Ind. - The American Council of Engineering Companies (ACEC) announced today that it selected Bernardin Lochmueller & Associates' (BLA) wetland treatment system in Washington, Ind. for a 2013 Engineering Excellence Honor Award. ACEC, the leading engineering trade association, evaluated 146 submissions and selected the Washington project as one of

24 to recognize nationally.

"We at BLA have worked hard with communities that want to improve water quality in local rivers and streams but that are also facing extremely tight budgets," said BLA President Mike Hinton. "We're honored that our solution has won national attention."

Like many Midwestern cities, Washington's sanitary and stormwater system were originally combined in order to save money. However as the city grew, it didn't have enough storage capacity and as little as 1/10 of an inch of rain caused combined-sewer overflows (CSOs) of sewage mixed with rainwater directly into waterways. The city needed to fix this, but the traditional approaches of separating sewer and stormwater pipes or adding wastewater treatment plant capacity would have cost \$53 million, according to one study. That is the equivalent of nearly \$11,800 for each household in this small city where the median household income is \$40,000.

The city's CSOs flowed into Hawkins Creek, which runs through residential neighborhoods. Between rains, the creek dried, turning gray and foul smelling. It supported no wildlife. A 2001 water quality study found unsafe levels of many contaminants, and the city posted signs warning residents that contact with the creek could make them sick.

Washington asked BLA to develop a solution that would incorporate "green design" to lower costs. BLA's engineers devised a system that cost \$26 million less to build, when compared with the next lowest-cost alternative. The solution also cut projected annual operating costs by \$1.6 million.

Now, when it rains, the CSOs flow to a 5-mg storage tank where it's held until the wastewater treatment plant can process it. When the tank is full, CSOs travel via two 84-inch pipes to a 27-acre constructed wetland. There, fine sediment settles in the forebay and then plants filter out contaminants. The effluent passes through a UV disinfection system before being discharged into Hawkins Creek.

In June, the Indiana Department of Environmental Management (IDEM) approved the system, saying it met Washington's Clean Water Act obligations. The system handled its first major rain events in September. Water quality tests showed that the water being discharged by the wetland system surpassed IDEM's quality requirements and even surpassed the

more stringent standards for the city's wastewater treatment plant. For the first time in years, Hawkins Creek has minnows, frogs, and other wildlife.

Washington's Mayor Joe Wellman said the project is a real advantage as the city works to capitalize on its newly opened I-69 exit.

"A lot of cities and towns are struggling with how to address combined-sewer overflows," Wellman said. "We're ahead of the curve in the sense that we've not only cleaned up local waterways, we've also provided a stable base for economic development."

The project has also been recognized by the ACEC Indiana Chapter, Water & Wastes Digest, and Engineering New-Record, Midwest.

Source: Bernardin Lochmueller & Associates Inc.