The Journal for Surface Water Quality Professionals

Stormwater

September/October • 2005

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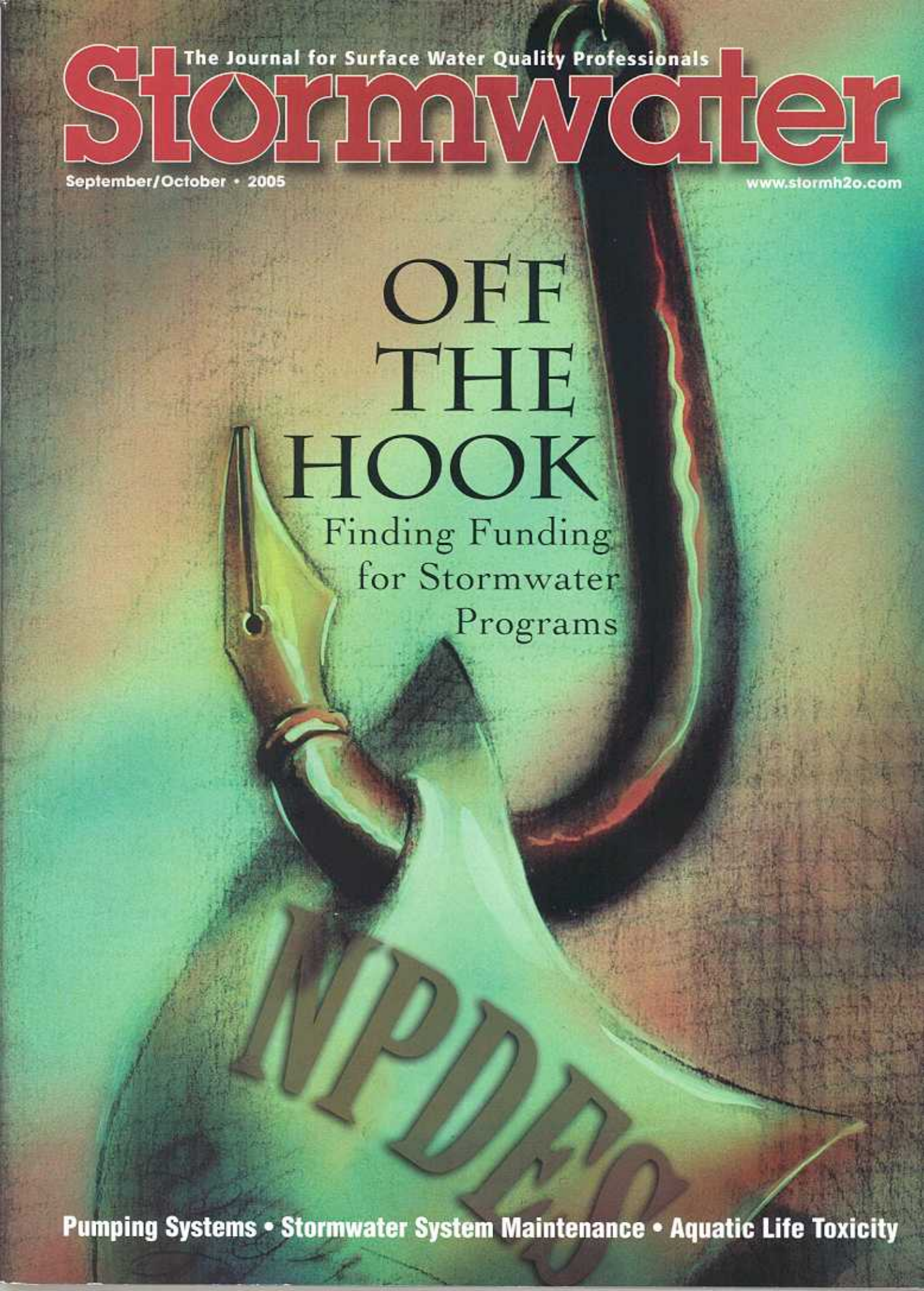


OFF THE HOOK

Finding Funding for Stormwater Programs

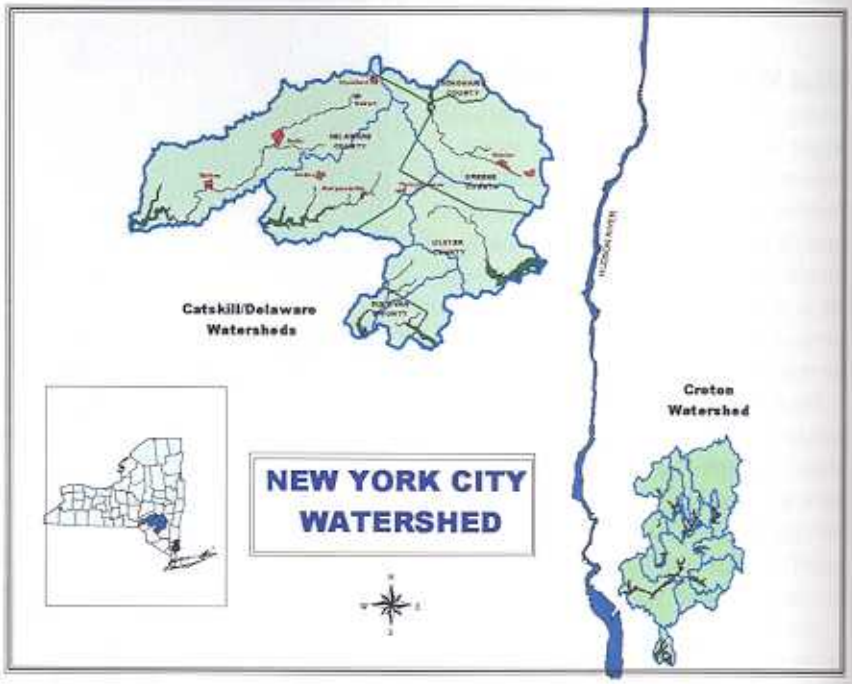
Pumping Systems • Stormwater System Maintenance • Aquatic Life Toxicity

PROJECT PROFILE

By JoAnne Castagna

Racehorse Farm Makes Strides to Protect New York City Drinking Water

A gathering of Thoroughbred racehorses quietly grazes on a pasture on the Akindale horse farm, 45 miles north of New York City in Dutchess County. Some of them are in training to be gold cup winners, but their farm is already receiving high points for the best management practices (BMPs) it's using to protect New York City's drinking water under a program being funded by the US Army Corps of Engineers, New York District.



New York City Watershed System

"The corps' New York City Watershed Environmental Assistance program is an interagency effort that assists in the implementation of projects to protect the water quality of New York state's watersheds, which provide drinking water to nearly half of New York state, including primarily New York City residents," explains Rifat Salim, project manager with the corps' New York District. "The program aims to do this without harming the economy of the communities," she adds.

The interagency team includes the Corps of Engineers, the New York State Department of Environmental Conservation, and the New York City Department of Environmental Protection.

The New York City watershed region encompasses approximately 2,000 square miles and includes three watershed systems—the Catskill, Delaware, and Croton systems—all located north of New York City in the counties of Delaware, Greene, Schoharie, Ulster, Sullivan, Westchester, Putnam, and Dutchess.

Whole Farm Planning

One of the projects the corps' program supports is the Watershed Agricultural Council's (WAC's) Whole Farm Planning program, which the Akindale Farm is taking part in. Many farms are located throughout the New York City watershed region, making the watersheds potentially vulnerable to nonpoint-source pollution.

"Stormwater passing through barnyards can transport the phosphorus and pathogens, or parasites, which are present in animal manure and deliver them to the streams that flow into the reservoirs," says Douglas Leite, project advisor with the corps' New York District. "Algae can feed off these nutrients and deplete the water's oxygen, adversely affecting water quality."

The voluntary Whole Farm Planning program works with farmers located in the watershed region to create and implement methods to improve how their farms operate. The goal is to protect the watersheds from nonpoint-source pollution without compromising the farms' business.

Under the Whole Farm Planning program, a team of WAC specialists visits farms, identifies and assesses potential sources of pollutants, reviews existing farm operations, and works with farmers to develop new operational strategies and BMPs for decreasing impacts to the environment and improving water quality in the watersheds.

The new operational strategies and BMP recommendations, or "Whole Farm Plan," is then developed in a team approach with the farmer, the WAC, and in some cases the local county soil and water conservation district. The farmer signs an agreement to implement the BMPs listed in the plan with assistance from the WAC team.

Presently, approximately 300 WAC-approved Whole Farm Plans

have been created. One of these is with the Akindale Farm, which is proving to be an example of the program's success.

"The Akindale Farm project demonstrates an excellent example of a local, regional, and federal partnership," notes the WAC's East of Hudson Program Manager Michael Saviola. Akindale Farm is a 358-acre horse farm located in the Town of Pawling in Dutchess County in the Croton Watershed. Horses represent a large investment in livestock inventory and equine infrastructure and occupy most of the agricultural land in

this region.

Akindale Farm produces high-quality Thoroughbred racehorses and provides training for horses owned by and boarded at the farm. The farm breeds and trains approximately 26 Thoroughbred race horses and also has 45 mature horses, 30 young horses, and 6 Holstein steers. Approximately 200 acres of the land are permanent pasture and 100 acres are forestland.

In 1998 the farm created a Whole Farm Plan in collaboration with the Dutchess County Soil and Water Conservation District. So far, several of the plan's BMPs have been successfully completed.

PROJECT PROFILE

Best Management Practices

One of the most successful BMPs implemented on the farm includes using exclusion methods to keep livestock away from streams. "Exclusion fencing was installed on one of the farm's pastures to limit the access of brood mares and foals, or young horses, to a nearby stream that runs adjacent to the farm," says Saviola. "By keeping the animals away from the stream, we are preventing potential animal pathogens from entering the water supply."

Saviola continues, "Since we excluded the animals from their primary watering source, we had to provide them an alternative water source in an area that was not wet or deemed 'hydrologically active.' We designed and constructed a winterized animal watering system so that the horses no longer had to rely on the nearby stream as a watering source."

Another BMP that was recently performed and funded by the corps was the redesign of the farm's manure composting facility. "The farm has a compost facility designed to treat potential parasites and alleviate

the need for and the operating expense associated with transporting manure for offsite utilization and/or disposal," says Saviola.

The farm collects manure and straw bedding from foals and temporarily stores it on an outside 100- by 200-foot asphalt compost pad with a reinforced concrete push wall, a filter field, and diversion. The farm's manure compost facility was improved to prevent any potential pathogens from migrating from the pad to a nearby watercourse during heavy rainfall.

"Although the compost facility was just completed, already the compost pad made the farm's manure handling and composting system a thousand times better," says Saviola. "It was designed to be a more stable surface with a grass filter area, which was created on the downslope side of the compost pad to intercept and treat any stormwater that happens to run off the pad during intense rainfall events."

Other BMPs in progress on the farm include measures to control the distribution of manure. One way the farm is doing this is by executing a comprehensive nutrient management plan that will recommend the proper type and amount of fertilizer needed to sustain good vegetative cover in pastures and to prevent excess nutrients from entering the water supply. Another measure includes a prescribed grazing plan to rotate livestock to reduce soil compaction and improve the quality of the pasture grasses.

Stormwater runoff, which can carry manure into the streams, is also being controlled by BMPs. The farm is installing a barnyard water management system designed to divert clean water away from any potential agricultural pollutant sources. Streambanks are also being stabilized with vegetation to prevent soil and manure from running off of the banks into the streams. In addition, the farm is improving access road construction to limit diffuse sources of sediment from the roads to streams.

BMPs that don't involve managing manure, excess nutrients, or sediment are also being implemented. The farm is making sure that all fuel products are stored away from streams to prevent water contamination.

BMPs not only protect drinking water but also support the local economy and survival of wildlife habitats. According to the WAC, well-managed farms keep space open, provide refreshing destinations for tourists, and provide food and fiber for the community. In addition, they can improve the habitats of local wildlife, in particular fish species.

More information about the WAC's Whole Farm Planning program is available at www.nycwatershed.org.

JoAnne Castagna, Ed.D., is a technical writer with the US Army Corps of Engineers in New York City.