



## Stormwater Success Story: Construction Site Erosion, Sediment, and Stormwater Management

Sediment is one of the most pervasive water pollutants in the United States. Soil eroded from stream banks and upland areas – including construction sites and farmland – muddies up urban and rural waterways, harming fish, suffocating smaller stream organisms, and clogging drinking water intakes.



*LFUCG Division of Water Quality Inspector Jeff Stine inspects a silt fence at a local construction site.*

Muddy waters have plagued Fayette County streams for decades. The Kentucky Division of Water has cited sediment and siltation as causes of impairment for portions of Town Branch, Cane Run, West Hickman Creek, and the north and south forks of Elkhorn Creek. Soil erosion from construction sites was significant enough to warrant inclusion in Lexington's 2011 Federal Consent Decree, which mandated improvements to Fayette County's stormwater and sanitary sewer programs. The US District Court ordered that the Lexington-Fayette Urban County Government (LFUCG) strengthen its construction site inspection program and adopt enforcement mechanisms to compel compliance with erosion and sediment control ordinances – even to the point of authorizing Lexington to issue stop work orders when violations are found.

After five years of stormwater program upgrades, comprehensive staff training, new inspection protocols, and escalating and enhanced enforcement mechanisms, LFUCG's compliance and monitoring program for construction sites is a resounding success. The program combines the professional expertise of LFUCG's Division of Engineering, the technical skills and field experience of the Division of Water Quality's (DWQ) Compliance and Monitoring Section, and the enforcement capabilities of the Division of Environmental Services in a seamless approach to reduce construction site erosion and sediment impacts to local waterways.

Richard Lamey, Manager of the DWQ Compliance and Monitoring Section, attributes the success of the program to the competence and dedication of the field inspectors who observe what's happening on the ground and then provide compliance assistance information to builders and contractors. The daily work of the inspectors is the overall key to minimizing erosion and controlling sediment. "The program has come a long way," Lamey said. "We have an exceptional staff which daily tackles the difficult task of inspection and enforcement at construction sites."



*Sediment control on residential lots has improved significantly due to the efforts of field inspectors and other LFUCG staff.*



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The work and dedication of the staff is apparent in the numbers, which tell a dramatic story of training, inspections, and – where necessary – enforcement action. For example, since the Consent Decree’s effective date in January 2011, staff have attended dozens of hours of training and coordination workshops, conducted tens of thousands of construction site inspections, issued thousands of violation notices, and cited dozens of poorly managed sites for further enforcement action – which can include fines, stop work orders, and future permit blocks.

### LFUCG Division of Water Quality 2015 Inspection Summary

Construction Site Type	Number Inspected	Inspection Percent
New Subdivisions	50	98
Demolition Sites	97	98
New Commercial Lots	174	98
New Residential Lots	474	98



*Prompt seeding of graded areas is required in order to minimize the potential of significant erosion occurring.*

98 percent overall – that’s pretty good by any measure.”

Ken Cooke of Friends of Wolf Run agreed that the construction oversight program has come a long way over the past ten years. “The improvements in erosion and sediment control practices in the field have been like night and day since 2006,” Cooke said.

“We are seeing higher quality installations, and better maintenance and repair on commercial and residential sites. When our monitoring volunteers report issues to LFUCG their response times are often within 24 hours. This has helped improve construction pollution control performance over all throughout the city.”

Demetria Kimball Mehlhorn, Senior Natural Resources Program Manager for the LFUCG Division of Environmental Services, said, “compliance has improved greatly over the past years, due to the diligence of field staff and education. The overall program of compliance expectations, inspections, and communication has proven effective.”

Kevin Lyne, who has conducted hundreds of inspections for LFUCG over the years, said the staff “really stepped up to the plate” in meeting the stringent requirements of the Consent Decree. “We had more than 800 active construction sites last year,” Lyne said, “and we’re required to inspect at least 90 percent of them every month. We actually averaged about



*Keeping sediment and other pollutants out of curb drains during construction is a high priority for Lexington’s stormwater program.*