



## SmartDitch Installed To Divert Stormwater Away From Concrete Pad Supporting Drinking Water Supply Tanks

*Soil erosion and undermining threatened pad's ability to support newly constructed Conestoga water storage tanks.*

### **Problem:**

Two new water tanks owned by Louisville Water Company were constructed to improve water supply to residents and businesses in and around Shepherdsville, KY.

Rain events that took place shortly after construction was completed revealed a stormwater flow pattern, from slope side run-off, was beginning to erode the soil and undermine the slab. Complicating the situation was the location of the tank. It sits on the side a hill overlooking the town. So, concerns were not only about the incoming run-off, but the outgoing flow control, as well.

### **Solution:**

Given the new water tanks' location and proximity to the hillside, GRW, the engineering firm for the water company, specified SmartDitch as part of the plan. They were looking for a permanent, low maintenance solution and understood earthen and rip rap channels would not fit those criteria. The design called for an 800' SmartDitch lined channel, 24" in depth, and consisting of several bends to accommodate the contour of the slope.

The 24" SmartDitch comes in 7.7' lengths, features a ribbed design for improved stormwater flow control, and is made from HDPE for durability and design flexibility. To address the curves and bends, SmartDitch Engineers teamed up with GRW to develop an installation procedure to install SmartDitch on a curve. To achieve this, the contractor strategically "notched" certain SmartDitch channel sections along the radius to allow them to navigate the curves within the excavated channel. It is important to note that these channel section adjustments were made onsite.

Once the design radius issues were worked out, the the 800-foot installation was completed in just two days!

### **QUICK FACTS:**

**Project:** Conestoga Water Tanks, Shepherdsville, KY

**Problem:** Soil erosion and undermining of concrete pad supporting two 1 million gal. water tanks

**Solution:** 800' of 24" SmartDitch, featuring several bends and curves

**Installation Contractor:** Flynn Brothers Construction, Louisville, KY

**Design Engineer:** Co-Designed by GRW, Louisville, KY & SmartDitch Corp. Engineering

### **SmartDitch Representative:**

HydroSource Inc., Louisville, KY

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*New water tanks were being threatened by slope-side stormwater run-off. SmartDitch solved the problem.*



*800' of 24" SmartDitch included several bends and curves to match the contour of this slope .*



*Installation took only two days to complete.*

