



Landfill

The SmartDitch System

A Common Sense Solution for Landfill Maintenance and Restoration Projects

Drainage
Erosion Control
Slope Stabilization

Landfill

It's About Control

Landfills are constructed in the surface soils of the earth for the purpose of solid waste disposal. Currently landfills are the most economical and environmentally acceptable method for solid waste disposal. Controlling stormwater runoff at landfill sites is critical due to the production of leachate, a liquid created after water from rain or snow melt are mixed with the chemicals in the waste, that percolates and drains from the landfill.

The SmartDitch Solution to Landfill Stormwater Runoff

SmartDitch is a leak-free channel lining system engineered to capture, re-direct and control stormwater runoff. Made from proven UV resistant HDPE, SmartDitch's unique corrugated design helps manage the direction and regulate the flow of potentially contaminated water, so that the drainage route patterns you design are successfully maintained and pollutants are directed to the proper collection and treatment system.



2,750 feet of 24" Trapezoidal SmartDitch Liner was used to control erosion and stabilize slopes at the Newton County, Indiana Landfill. SmartDitch's proven water flow control characteristics, low maintenance and ease of installation made it the best option for this project. The bulk of this installation took just 3 days and a crew of 5.

The SmartDitch Solution for Landfill Sediment and Erosion Control

The SmartDitch System is often specified to form defined ditches designed to control erosion and catch loose sediment while improving landfill drainage. SmartDitch's rugged construction and anchoring system resists the hydraulic forces of flow and provides a stable channel engineered for years of maintenance-free service.



Initially, SmartDitch was installed in a channel at this Puente Hills Landfill site to temporarily control a conveyance ditch. However, considerable settlement over time made the use of concrete channels (originally specified) unusable and SmartDitch became the permanent solution.

Today's landfills are designed to prevent environmental contamination of all kinds. If water from rain and snow is not managed, and the leachate is not directed or collected, toxins can leak into the environment polluting creeks, stream beds and the local groundwater system.

SmartDitch – Easy to Transport, Handle and Install

One of the features that makes SmartDitch ideal for landfill restoration projects is its weight and ease of installation. SmartDitch is easily transported to the jobsite and can be handled with minimum equipment. Each SmartDitch section can be moved into place with one or two people, allowing for maneuverability in rugged or steep terrain. It is designed to utilize the surrounding soil for support and is easily installed with supplied anchoring system and assembly hardware.



One section of the Waterbury, CT landfill had a 3 to 1 slope where high velocities of stormwater was causing severe soil erosion and destabilizing the embankment. 235 lf of 12 in. SmartDitch was installed to correct the problem where traditional methods, such as rip rap, failed.

SmartDitch – A Recognized Stormwater Drainage, Erosion Control and Slope Stabilization Solution

SmartDitch has a proven track record of successful applications and has been used for

- ▶ Landfill erosion and control
- ▶ Public Works and Municipal drainage projects
- ▶ Highway and transportation sector erosion control
- ▶ Residential drainage and stormwater flow control
- ▶ Industrial site stormwater and spill control
- ▶ Irrigation and water conservation district drainage programs
- ▶ Construction site stormwater treatment

The SmartDitch System Has Been Specified by:

- ▶ The Natural Resources Conservation Service
- ▶ The U.S. National Forest Service
- ▶ South Dakota Rocky Mountain Power
- ▶ U.S. Army Corps of Engineers
- ▶ DOT Sites including: Wisconsin, Utah, New Mexico, and Michigan
- ▶ Canadian Ministry of Transportation

SmartDitch is Engineered for Quick Installation



A light-duty backhoe is all that is needed to dig the shallow trench in preparation for the SmartDitch installation.



SmartDitch is light enough to be hand-carried to the trench, and allows for easy transport to areas where vehicle access is limited.



SmartDitch sections, manufactured in 8' - 10' lengths, are ready for joining in the shallow trench at the base of the landfill.



The SmartDitch anchoring system installs quickly and secures the system into the ground.

SmartDitch System – Engineered by Penda Corporation

SmartDitch is manufactured by one of North America's largest and most advanced plastics production operations – Penda Corporation.

As the #1 heavy-gauge thermoforming manufacturer in North America, Penda channels its expertise in plastic engineering and manufacturing into three market-leading businesses:

- ▶ Truck bed liners and tonneau covers for both Original Equipment Manufacturers (OEM) and aftermarket
- ▶ Aftermarket HDPE thermoformed water management solutions
- ▶ Custom solutions for manufacturers of every kind

Penda is a global leader in materials research, product development and manufacturing, with a 40-year heritage of developing and producing award-winning products.



For More Information

SmartDitch is manufactured in the U.S.A. It is a safe, economical, long-lasting, and environmentally sound solution to stormwater management and erosion control. For more information on the SmartDitch HDPE Channel Lining System contact:

