Article 118

Technical Note #2 from Watershed Protection Techniques. 1(1): 11-13

Level Spreader/Filter Strip System Assessed in Virginia

The effectiveness of vegetated filter strips in urban areas is frequently defeated by concentrated runoff flows that quickly erode through the strip. To compensate for this recurring problem, Yu and his colleagues designed a concrete level spreader to direct runoff evenly across the entire surface of a vegetated buffer (Figure 1).

In a practical demonstration, runoff from a ten-acre shopping center was routed into a distribution box that diverted approximately 0.4 watershed-inches of runoff into an earthen "V" shaped trench nearly 600 feet in length.

Runoff volumes in excess of this treatment volume bypassed the system via an emergency spillway located at a higher elevation at the end of the trench. A concrete weir was installed at the lip of the downslope crest of the trench, where it served to evenly spread runoff overflows across a 150-foot grassed filter strip.

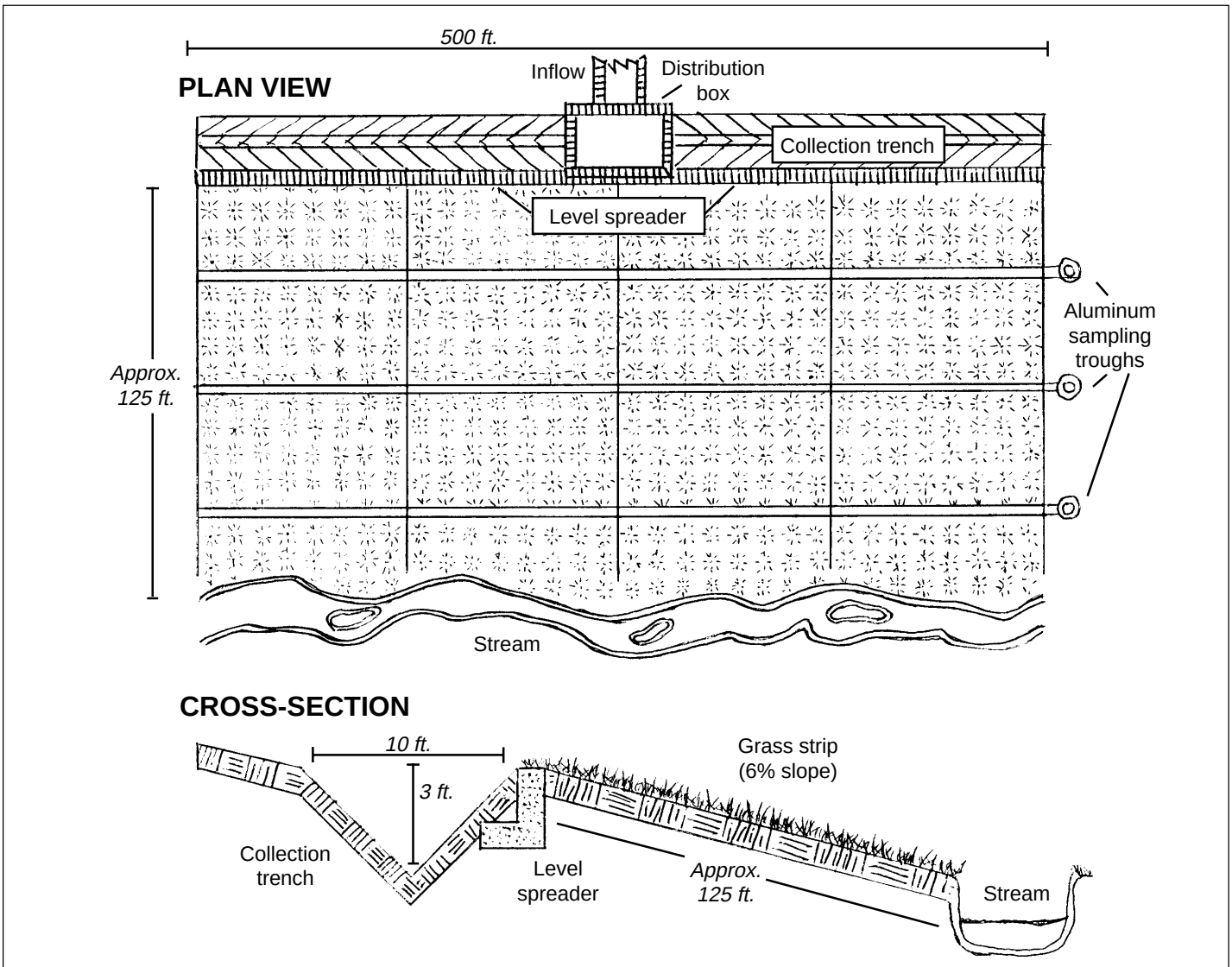

Figure 1: The Yu Concrete Level Speader/Vegetative Buffer System *(Yu et al., 1992)*