

Faircloth Skimmer

What the innovation is and why it is innovative?

The **Faircloth Skimmer®** surface drain is an innovative dewatering device which floats on the surface of the sediment basin, allowing the basin to fill and sediment to remain in the bottom of the basin while releasing the highest quality water near the surface. The skimmer inlet controls the rate of out flow, draining the basin slowly at a uniform rate over several days at a constant rate to maximize settling of sediment. The adjustable orifice regulates the filling and drawdown of the basin and improves trapping efficiency. The float is designed to rise and fall as the basin fills and drains, and a skirt creates a barrier to floating debris that would clog the inlet. The skimmer works automatically using gravity to drain and requires no external power source.

What it changed or replaced?

Faircloth Skimmer® surface drains replace traditional rock and perforated riser outlets in sediment traps and basins, which drain from the bottom of the basin, releasing the muddiest water downstream where sediment deposits pollute waterways. Other options of surface drains include using a pump or a siphon with a floating inlet which would drain the basin from near the surface, but these methods are not automatic and have to be manually started after each rainfall. A flashboard riser would also drain from near the surface but must be manually operated.

Where and when it originated, has been used, and it's expected to be used in the future?

The **Faircloth Skimmer®** surface drain was developed and tested over several years by Warren Faircloth and patented in 1998. As a county Erosion Control Supervisor, Warren was concerned that traditional methods for containing sediment on construction sites were not effective, resulting in sediment pollution. His goal was to develop a method for sediment control that would be easy to use, economical, and effective. The **Faircloth Skimmer®** has evolved into a tool that meets these criteria. It has been extensively researched by Dr. Albert Jarrett at Penn State University and by Dr. Richard McLaughlin at North Carolina State University and found to be significantly more effective than other current methods. The Environmental Protection Agency is considering recommending use of the skimmer together with other components as a sediment basin standard. The skimmer is manufactured and distributed throughout the United States and in Canada and Puerto Rico by J. W. Faircloth & Son, Inc. Surface drains are now the best method for draining sediment basins, and are recommended by many states and professional organizations.

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