Storm Water Solutions, II

Aulds, Peyton

The purpose of this project is to design and develp a filtration system that will filter nitrates and/or phosphates from rain water. A media will be selected to test the pilot filter at one selected testing site to see if it is effective in filtering out the two elements. Samples of the rain water will be taken before and after entering the filter. The second phase of this project is to add three additional test sites to the existing data. The rain water will be tested to see if there is different levels of pH, nitrate and phosphate in different locations. The procedures were ran from AP Environmental Science Kit. The hypothesis is the filter will "reduce" the amount of nitrate or phosphates entering the ground and or surface water and that there will be a significant difference in the elements. The null-hypothesis is the filter will not filter enough nitrates or phosphates out to make any difference in the water samples. The "non-filtered" results showed no significant change in nitrate, phosphate or pH levels. The "filtered" results showed no significant change in nitrate or phophate levels, only a slight difference in pH. A deviation experiment was performed to prove the filter and resin worked. Water samples were taken from the classroom aquarium, the same testing procedures was performed. The nitrate level went from 2.2 ppm to .88 ppm which proved the filter worked. There was not any difference in the phosphate or pH levels.

Awards Won: