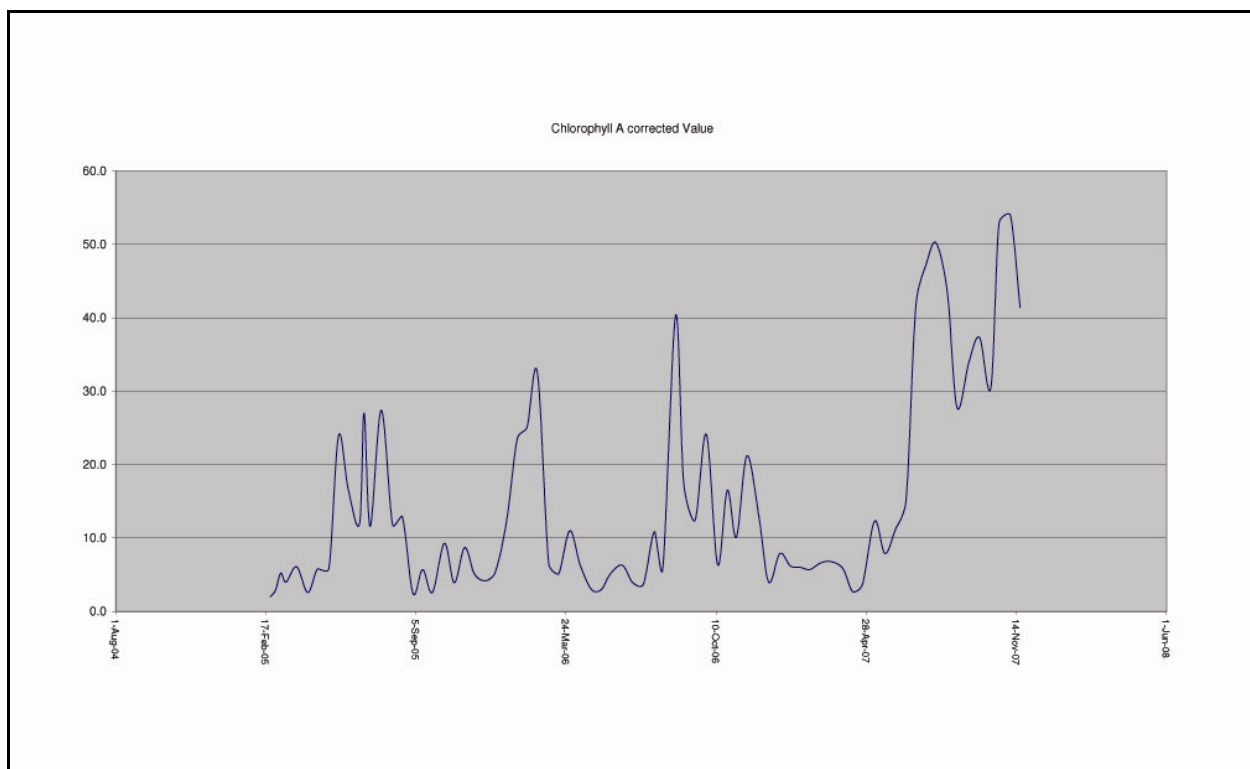


Chlorophyll α and Total Phosphorus Removal Using Floc Logs

Beginning in 2005 a group with the Reedy Creek Water Management District, under the supervision of Eddie Snell, began treating a 2.4 acre stormwater pond that discharges into a drainage canal system. Using a SolarBee the 3 million gallons of water were circulated at a rate of 347 gallons per minute. The team at Reedy Creek initially integrated twelve (12) 703d#3 Floc Logs with the SolarBee with the idea that the Floc Logs would be able to remove the phosphorus in turn decreasing the algae in the pond.

Data was consistently obtained to determine the amount of chlorophyll α and total phosphorus in the system. After a period of several months it became obvious that by adding the Floc Log to a circulating water body chlorophyll α and total phosphorus are reduced. There was an obvious trend in the chlorophyll a and phosphorus levels as the Floc Logs begin to fully dissolve. Figure 1 shows how the overall trend over a 1000 day period.

Figure 1



The data at the far right of the graph is skewed because the site was allowed to turn stagnant. Under normal circumstances this type of skewing would be detrimental to an experiment; however, this strengthens the fact that Floc Logs do not work to their full potential unless there is movement of the water.

Once the water body began to circulate again data was again collected on the effectiveness of the Floc Log to remove phosphorus once it had entered into the water body. Initially it was found that the Floc Logs removed approximately 75% of chlorophyll α , with further testing the Reedy Creek Water Management District was able to show an 82.5% decrease in chlorophyll α and an 85.1 % decrease in total phosphorus.

