

Polymer Enhanced Stormwater Treatment Ditch Polymer Enhanced Dewatering Application

Polymer Enhanced Stormwater Treatment Ditches are used as a passive continuous flow chemical treatment system to introduce non-toxic site-specific Silt Stop polymers and Floc Logs to turbid waters in such a manner to facilitate mixing and reaction between the Silt Stop powder and Floc Logs and the suspended particles. Collection of the flocculated particulate greatly reduces turbidity in stormwater.



A ditch is built, using straw or hay bales, running downhill. The bales are staked down to hold them in place. The far end of the ditch is built wider; this is where the particle collection will occur



The ditch is lined with plastic sheeting to prevent erosion to the soil due to the high velocity flow expected.



The site-specific Floc Logs are secured in the upper end of the treatment ditch.

The logs are placed in a series running down the ditch, to ensure the required mixing is achieved.



The lower part of the ditch is where the particle collection will take place. This is built wider than the mixing portion, to allow the water to slow its velocity.

Jute matting is secured in place, and is applied with the site-specific Silt Stop powder to aid in particle collection.



The pump is set up so that the feed is only pulling turbid water into the treatment ditch.

The turbidity in the pond is about 700 NTU.



The pump was turned on, starting the flow down the treatment ditch.

The flow rate was 650-700 GPM with a 6" 300 ft line with approx. 20-22 ft head.



The water as it flowed off of the end of the jute field had a turbidity of 11 NTU.



The water flowed down a grassy swale and over a silt fence before exiting the site. The turbidity as it exited the site was 2.1 NTU.