

Willow Brook

Three very nicely landscaped storm water retention ponds located behind houses in a Kansas City suburb. The location would not allow access to the ponds with excavating equipment or trucks.

Pond 1 was at the outfall of a large box culvert under a four lane street. The sediment was very heavy and contained a lot of large flat stones (about the size of a dinner plate). These could not be pumped so a limited amount of material was removed with the dredge.



Pond 2 had silted in with three to four feet of organic, clay and gritty sediment. There were also some stones and trash.

This sediment was much more solid than pond 3, so the jetting attachment was used to help excavate the sediment.



The sediment was pumped from pond 2 into a geotextile 4x6 45 ft. circumference x 25 ft. long Envirotube placed in a cul de sac 300 feet from the pond. Pallets and firewood was used to stabilize the tube to prevent rolling.

Two tubes were used in the second cul de sac. The material in pond 2 was more solid than pond three with



a shrink rate of about 4-1. The decant water from these tubes was also returned to the pond by gravity.

Pond 3 was filled five feet deep with a very organic mud sediment. This material was removed with a 4 inch dredge and pumped into an Envirotube placed in the cul de sac in front of the houses 250 ft. from the pond. The mud remained in the tube and the clean water was returned to the pond by gravity through a storm drain.

A single coagulant polymer was used to speed up the dewatering process and clean up the decant water. The removed sediment shrunk 6 - 1 from insitu. This means the 100 CY capacity tube actually received 600 CY of insitu material.

Three 40 ft. circumference x 25 ft. long tubes and one 30 ft. circumference x 50 ft. tube were used to dewater 5000 CY of insitu sediment. Many aluminum cans and plastic water bottles were pumped with the sediment.

