

# FAQ'S



## ENVIROTUBES™

**Q: WHAT SIZES ARE ENVIROTUBES™?**

**A:** Envirotubes are measured by circumference and length. The fabric is woven in 15' width so the common denominator for circumference is 15'. The circumference of the tube will be 15', 30, 45', or 60'. Any length to 200' is common. The larger the circumference, the lower the unit cost of dewatered CY [cubic yards]. The tube lays out half of its circumference by whatever length we sew it to.

**Q: WHAT SIZE ENVIROTUBE™ SHOULD I USE?**

**A:** There are two CY measurements on the job. One is the in situ CY [CY of sediment in the pond] The other is haul away CY [the dewatered CY of solids in the tube] The difference is normally about 3 to 1. The in situ sediment will usually shrink 3 to 1. For each 100 CY of sediment removed from the pond about 33CY will be left dewatered in the tube. The hanging bag test will tell you this. (please request one from us) Example: A 45' circumference tube will hold a maximum of 4 haul away CY per linear foot. A 60' circumference tube will hold a maximum of 6 haul away CY per linear foot. With a shrink rate of 3 to 1 that means you would need 1 linear foot of 60' circumference tube for every 18CY of sediment in the pond. Very organic material will often shrink more than 3 to 1.

**Q: HOW DOES THE ENVIROTUBE™ WORK?**

**A:** The way the tube works is as you pump into the tube the water will come out through the fabric and the solids stay in. Eventually the fine grain materials will plug the fabric and the tube will pump up like a water balloon. Then switch to the next tube. While the next tube is being pumped the solids will drop out in the first tube and the filter cake will peel off the slippery fabric. The tube will then dewater like Niagara Falls

**Q: HOW DO I PLACE THE ENVIROTUBES™?**

**A:** The tube must either be placed on level ground and or be restrained to prevent rolling. If the tube is placed on a grade crosswise the lowest tube must be placed and filled first. This must be restrained by a berm or structure for it to lean against. The sewn on handles will not hold it. The next tubes can be placed so they lean against the first tube. This will prevent roll. If the tube is placed on a grade lengthwise some capacity will be lost and this will put a stress on the tube. A 1% grade or more will require special instructions on a 50' long tube or longer. The other thing to watch on the tube installation is erosion. There is a lot of water, anything other than a hard surface [blacktop or concrete] will erode. A plastic underlayment will prevent this. The tube dewateres out the top so no porous underlayment is needed.

**Q: DO I NEED A POLYMER?**

**A:** A polymer is usually needed and definitely speeds up the process, makes for clean decant water, and saves money on tubes. It is very desirable to return decant water to the pond as the tubes and polymer work better with a wet slurry.

**Q: HOW DO I TELL HOW MUCH POLYMER TO USE?**

**A:** When connecting the discharge line to the tubes allow for a sample port before the slurry enters the tube [a 2" ball valve works great]. This way you can adjust the polymer feed to the best efficiency, saving time and money.

**Q: HOW DO I TELL WHAT POLYMER TO USE?**

**A:** This is determined by testing the slurry with polymers to choose the right one. This can be done on site, or by the polymer MFR in a lab.

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**Q: HOW DO I TELL HOW MUCH TO PUMP INTO THE ENVIROTUBE™?**

**A:** The first pumpings should be only about 4' or 5' high. The final pumping to 6' high. The easiest way to measure this is to place a post on both sides of the tube and run a string across. This can be seen from a distance. Each time the tube is pumped to full height the fabric stretches and becomes weaker.

**Q: HOW DO I DETERMINE HOW MUCH HAS BEEN DEWATERED?**

**A:** When dewatering with tubes the method of payment needs to be established before the job starts. Remember you will usually haul away only 1/3 or less of what is removed from the pond. It is difficult to judge how much sediment you removed by measuring the tubes.

**Q: HOW DO I EMPTY THE ENVIROTUBES™?**

**A:** Empty the tubes from one end. Do not cut open the whole tube, if it rains you will have a mess. As you cut the tube on one end you can drive on the bottom fabric to access the dried material.

**Q: HOW CLEAN CAN I GET THE DECANT WATER?**

**A:** Different states have their own specs on TSS that can be released to the environment. Any specification can usually be reached. This is especially important when dewatering contaminated materials or releasing to a fragile environment. To get very clean decant a second polymer is often required. Also special care needs to be taken at the initial fill of the tube to prevent flutter that will allow solids to pass through the fabric. Many or most contaminants like PCBs, etc. will cling to the solids and stay in the tube, requiring little or no after treatment.

**Q: WHAT TO DO WITH THE FABRIC FROM THE TUBE AND CAN IT BE USED AGAIN?**

**A:** The tube is a onetime use. There is no nice way to close the tube so it can be used again. Also every time the tube is pumped the fabric stretches and weakens. The fabric has secondary uses as a geotextile. Landfills and landscapers like to get it. Do not plan on getting paid for it.

**Q: WHAT TO DO ABOUT SMELL?**

**A:** There is usually very little or no smell when using tubes. Even when dewatering a very smelly organic material. Some chemical smell and cattle manure smell can be strong when using tubes. There is often a visible gas release through the fabric but it is usually CO2 with little or no smell. The usual H2S smell associated with organic sediment is relieved by oxygen during the pumping process.

**Q: WHAT ARE THE GREATEST ADVANTAGES OF USING A TUBE OVER MECHANICAL DEWATERING?**

**A:** Time on the job is the greatest advantage. On a press job the production is limited by the press. Often the dredge or pumping system can only run 10% to 20% of the time. With the tube you never have to shut down the pump and wait for the tubes. Reduced polymer cost. The tube usually requires 25% or so the polymer of a press. Dewatering with tubes is not affected by weather. Rain on the tubes does not affect dewatering and the material in the tubes will not re-saturate. On a press job the dewatered material has to be protected or it will resaturate. Also with the tubes there is no capital cost. No expensive equipment to rent or buy.

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