

Pond & Lake Clarification

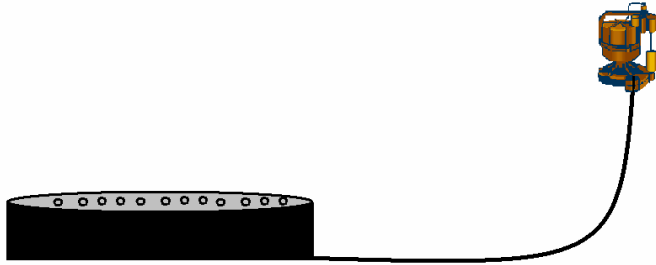
Aerator or Bubbler Mixing System

Floc Logs are designed for use in flowing conditions that will generate adequate mixing and reacting to allow the polymer blend to dissolve and disperse. Floc Logs are used to treat turbid water or nutrient laden water reducing TSS values, NTU values, nutrients and metals. An aerator or bubbler mixing system is used to introduce site-specific polymers to turbid waters in such a manner as to facilitate mixing and reaction between the polymer, and suspended particles. This type of system is most useful where there is a pond that does not have a natural source of agitation to stimulate a reaction for the Floc Logs.

An aerator is placed on the bottom of the pond where site specific Floc Logs are tethered allowing the bubbles to flow over and around them creating the agitation needed for the reaction that will allow the polymer blend to dissolve and be dispersed throughout the water. The aerator should be placed in the center of the pond so that the Floc Log concentration is not only in one area; this will promote even distribution and better performance.

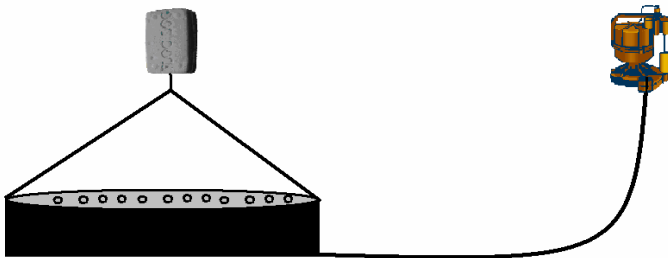
- i. An aerator or bubbler mixing system is used to introduce the Floc Logs polymer blend into an aquatic site whenever a natural agitator (i.e. flowing water) is not available.
- ii. The aerator system can be designed to hold multiple Floc Logs in a series for deep ponds or to hold many logs at a certain depth to combat turbidity.
- iii. Floats are vitally important to this system for two reasons: to mark the place of the system in the pond and to hold up of the Floc Logs over the aerator. By securing the Floc Logs to the float line the Floc Logs will remain in the pathway of the bubbles produced by the bubbler or aerator.
- iv. Allowing the continual operation of the aerator, the Floc Logs will dissolve over time and therefore periodic observation and replacement is necessary

Step-by-Step Aerator or Bubbler Mixing System



Step 1: Pump Preparation

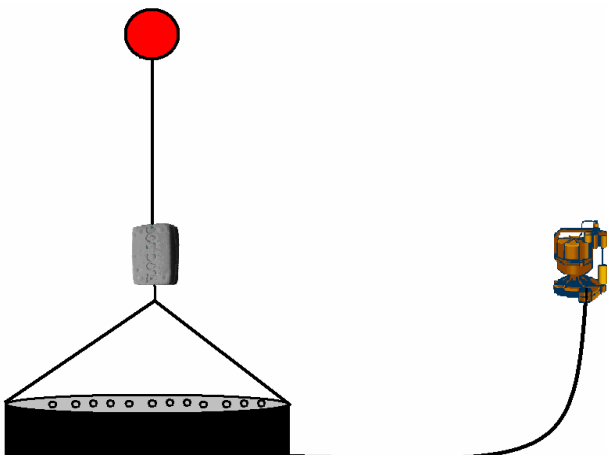
Prepare an aerator and pump system with air lines sufficient to place the aerator on the bottom of the pond. This system should be placed in a central location underwater in the pond.



Step 2: Floc Log Attachment

Tie a rope from the edge of the aerator in two or more positions to secure the Floc Logs.

When attaching the Floc Logs be sure that an inverted “V” shape is made by the rope, logs and aerator.

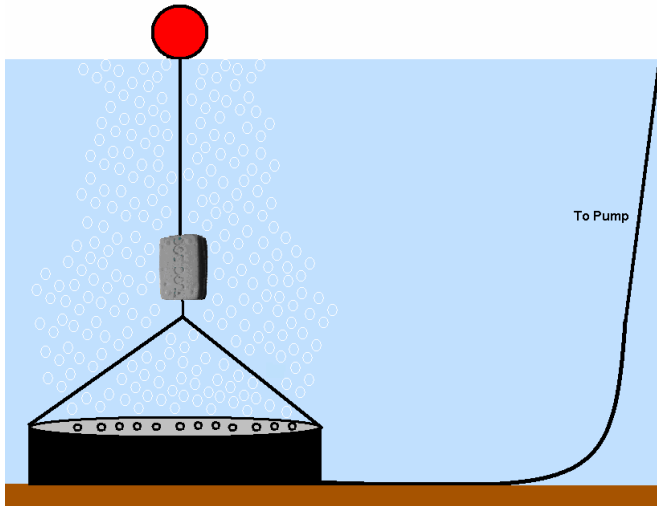


Step 3: Float Attachment

Secure the float to the system at the same point that the Floc Logs are attached.

This is recommended to ensure that the float does not get unattached from the system as the Floc Logs dissolve.

Step-by-Step Aerator or Bubbler Mixing System

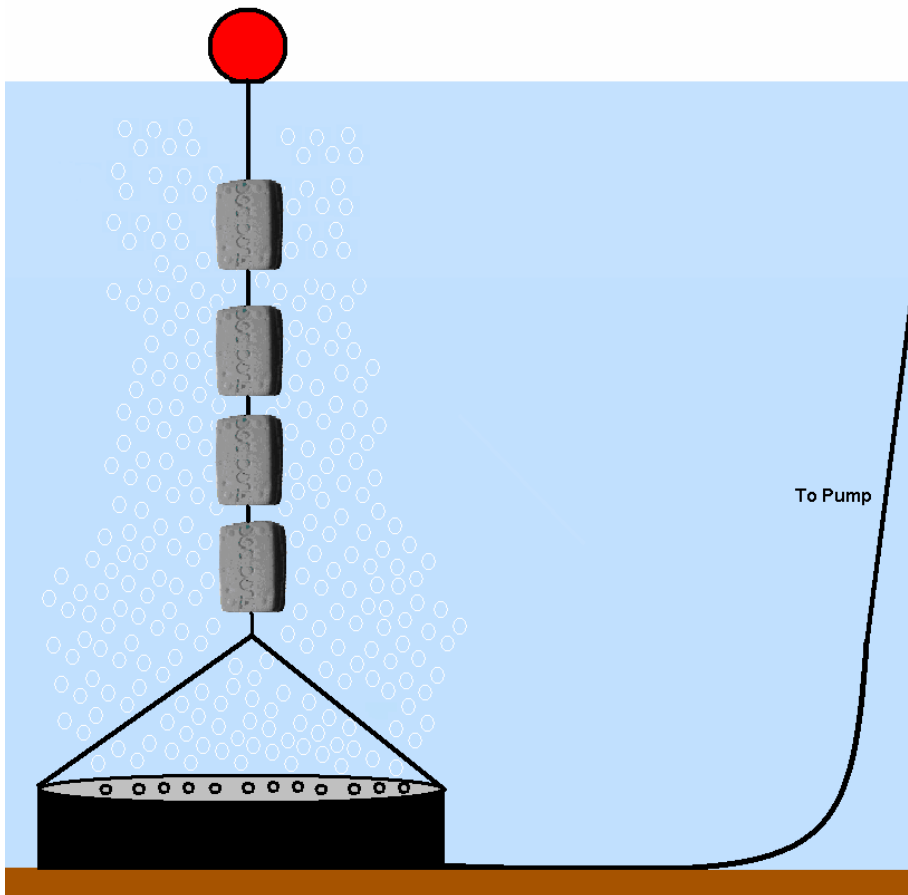


Step 4: Positioning of System

Using a boat slowly guide the system to the desired location (as close to the center of the pond as possible).

Be aware of the air line between the pump and aerator to prevent kinking and possible cutting from boat motor.

Aerator or Bubbler Mixing System with Multiple Floc Logs in Series



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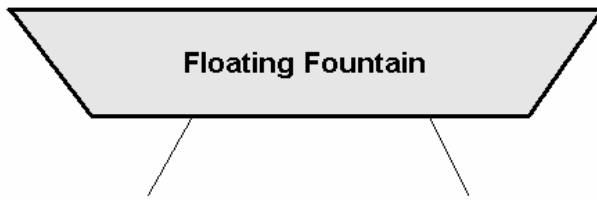
Floating Fountain Mixing System

The Floc Logs are designed for use in flowing conditions that will generate adequate mixing and reaction to allow the polymer blend to dissolve and disperse. Floc Logs are used to treat turbid water or nutrient laden water reducing TSS values, NTU values, nutrients and metals. A floating fountain mixing system is used to introduce site-specific polymers to turbid waters in such a manner as to facilitate mixing and reaction to dissolve the polymer block/logs and disperse the polymer throughout the body of water. This type of system is most useful where there is not a natural source of agitation to stimulate a reaction for the Floc Logs.

A basket is hung on the bottom of the fountain where site specific Floc Logs are tethered allowing the water flowing up to the fountain to create the reaction necessary to distribute the site specific Floc Log polymer blend by flowing over and around the Floc Logs. The fountain should be placed in the center of the pond so that the Floc Log concentration is not only dispersed in one area; this will promote even distribution and better performance.

- v. A floating fountain mixing system is used to introduce site specific polymer into an aquatic site whenever a natural agitator (i.e. flowing water) is not available.
- vi. The floating fountain mixing system is designed to hold Floc Logs suspended in a basket under the fountain. It is important that the Floc Logs are in the flow of the water being pulled up by the fountain or this system will not perform at the maximum efficiency.
- vii. The size of the basket used in this system depends on the number of Floc Logs that are needed in the system. Keep in mind; however, if the water source that is being treated is large it might be best to use multiple floating fountains instead of a larger basket on one fountain. Also, the logs need to stay in the flow of the water to work properly.
- viii. Allowing the continual operation of the floating fountain, the Floc Logs will dissolve over time and therefore periodic observation and replacement is necessary.

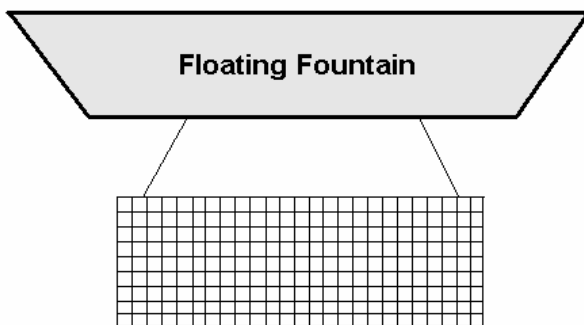
Step-by-Step Floating Fountain Mixing System



Step 1: Fountain Preparation

Assemble the floating fountain in accordance with the manufacturers' instructions.

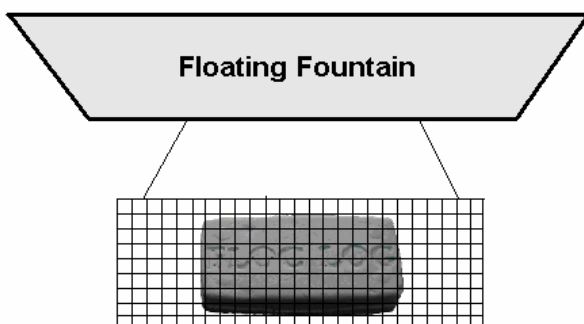
Next attach two lines to the bottom of the fountain approximately 6" long.



Step 2: Attaching the Basket

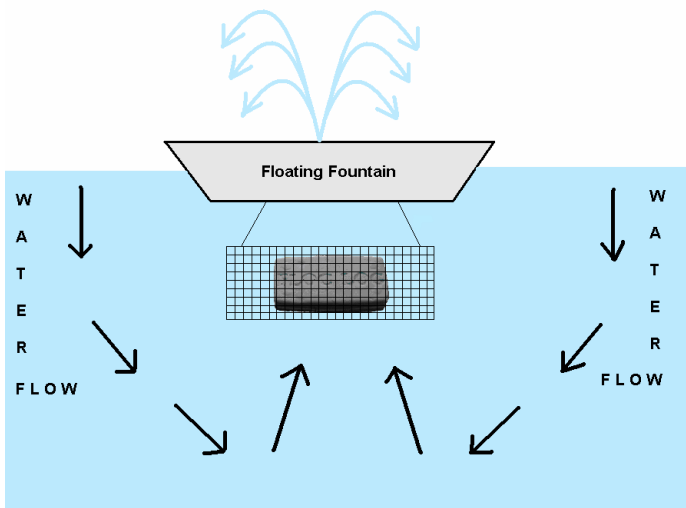
Secure these lines to the top of the Floc Log basket; making sure that the door to the basket is still accessible.

Be sure that there are no obstructions that would prevent water to flow past the logs.



Step 3: Floc Logs in Basket

Simply place the Floc Logs inside the basket and securely close it.



Step 4: Submerge the Fountain

Using a boat, take the entire system to the desired position and slowly release it.

It is important to remember that the continual operation of the fountain will shorten the life span of the Floc Logs so frequent observation is necessary.

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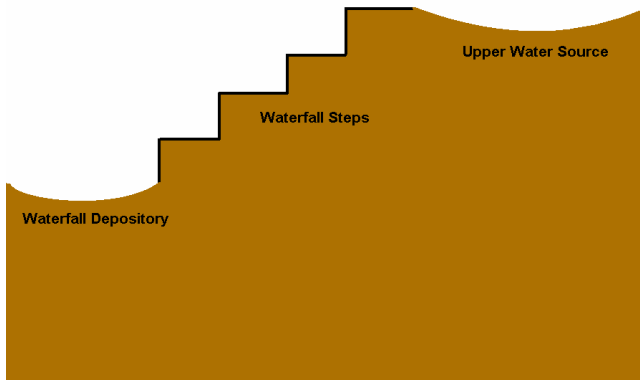
Waterfall Mixing System

The Floc Logs are designed for the use in flowing conditions that will generate adequate mixing and reaction to allow the polymer blend to dissolve. Floc Logs are used to treat turbid water or nutrient laden water reducing TSS values, NTU values, nutrients and metals. A waterfall mixing system is used to introduce site-specific polymers to turbid waters in such a manner as to facilitate mixing and reaction to allow the polymer block/log to dissolve and be dispersed throughout the pond or lake. This type of system is most useful where there is a man made waterfall.

The Floc Logs are simply placed on each “step” to facilitate adequate mixing and reacting. This would be similar to a towel in a washer machine. It is important that the Floc Logs are in the flow of the water from the water fall or this system will not perform at maximum efficiency. The Floc Logs will need to be secured to prevent them from falling down the steps of the waterfall as a result of high rate water flow.

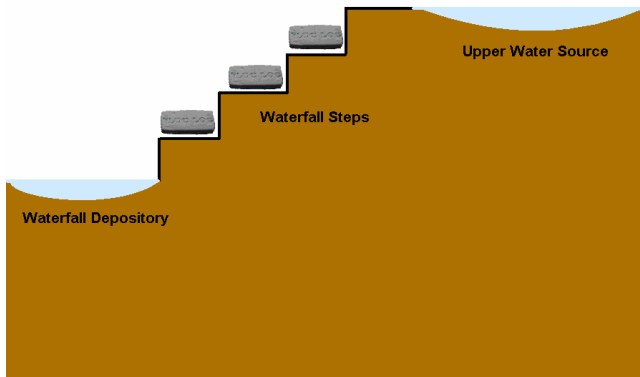
- ix. A waterfall mixing system is used to introduce the Floc Logs polymer blend into an aquatic system.
- x. The waterfall mixing system is designed to insert Floc Logs into the flow of water created by the waterfall. It is important that the Floc Logs are in the flow of water to facilitate mixing and reacting or this system will not perform at the maximum efficiency.
- xi. The number of Floc Logs used in this system will vary on the dosage rate needed for the system and the number of steps available in the system. If there is a need for a high concentration but there are only a few steps it could be possible to put more than one Floc Log on each step.
- xii. Allowing the continual operation of the waterfall, the Floc Logs will dissolve over time and therefore frequent observation and replacement will be necessary.

Step-by-Step Waterfall Mixing System



Step 1: Waterfall Preparation

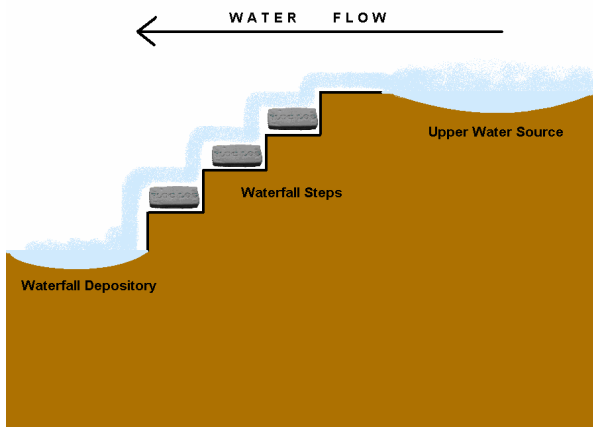
In man made waterfalls “steps” must be created for the Floc Logs to sit on.



Step 2: Floc Log Placement

Secure the Floc Logs to the appropriate steps of the waterfall depending on the needed dosage rate for the system.

In areas where the water flow is faster it may be necessary to secure the Floc Logs at both ends to the ground outside the waterfall.



Step 3: Start the System

Turn on the water ensuring that the Floc Logs are being completely covered with water as it flows downward.