

# Frequently Asked Questions About the *Faircloth Skimmer*<sup>®</sup>

## **1. What is a *Faircloth Skimmer*<sup>®</sup> and what does it do?**

A *Faircloth Skimmer*<sup>®</sup> is a surface drain that floats on top of the water in a sediment basin. The skimmer inlet controls the rate of out flow and rises and falls as the basin fills and drains. It releases the cleanest water in the basin from near the surface. A skimmer is used instead of the rock and perforated riser outlets in sediment traps and basins.

## **2. What is so important about using a skimmer to drain a sediment basin? Why is a surface drain better than the old methods using stone outlets or perforated risers?**

The purposed of a sediment trap or basin is to capture muddy water and allow the sediment to settle to the bottom. The old methods drain the basin from the bottom, releasing the muddiest water in the basin. The skimmer is a surface drain that releases the cleanest water (although often still turbid) in the basin near the surface.

The *Faircloth Skimmer*<sup>®</sup> also controls the filling of the basin since just a trickle of water goes out during filling, thereby capturing most of the initial runoff to fill the pond and creating conditions where settling will occur. Then it drains the basin at a uniform rate in the required time, which other outlets don't do and can't do because of their variable heads.

Using a pump or a siphon with a floating inlet would drain the basin from near the surface but these methods are not automatic and have to be manually started after each rainfall. A flashboard riser would also drain from near the surface but must be manually operated.

## **3. Will using a skimmer in just any sediment basin improve performance?**

No, not necessarily! A surface drain will not make a hole in the ground an efficient basin. Many other factors are involved.

## **4. Does the skimmer also replace the spillway in the basin?**

**NO!** Definitely not! The skimmer only drains the basin from the crest of the overflow down to the bottom. Its flow capacity to is too small to handle overflow so a spillway or riser or both are needed.

## **5. What does the skimmer size mean?**

The size of the *Faircloth Skimmer*<sup>®</sup>, a 3" skimmer or a 4" skimmer for example, refers to the maximum size of the water inlet pipe. It does not refer to the pipe size used for the float or the barrel (or "arm" as some refer to it).

## **6. How do I determine the size skimmer I need? Is it a complicated calculation?**

It is a simple process to choose the skimmer. You need to know the volume of the sediment basin in cubic feet and the number of days to drain the basin. Then, look at the flow charts on this webpage under *Determining the Skimmer Size*. Choose the smallest size that will drain the basin's volume in the required time. It may be necessary to reduce the flow rate further with a smaller orifice or hole in the inlet using the plug and adjustable cutter provided. The orifice size is calculated using the simple steps under #2 in those instructions.

Call us at (919) 732-1244 if you have questions or need help.

**7. Can the inlet be adjusted to reduce the rate of flow through the skimmer?**

Yes. The inlet size can be reduced using the plug and adjustable cutter included to reduce the flow through the skimmer and “customize” the flow rate for the volume of the basin the skimmer is to be used in.

**8. Can the chart for sizing the orifice shown in various erosion control manuals be used to size the Faircloth Skimmer®?**

NO! These charts do not take into account the variation in the head (the depth of the inlet under water) of the different sizes of our skimmers. Use the flow charts on our webpage.

**9. Can copies of the Faircloth Skimmer be made by anyone?**

NO! The Faircloth Skimmer® is patented, #5,820,751.

**10. Why is the barrel or “arm” pipe between the flexible hose and the skimmer inlet smaller than the inlet pipe?**

It is smaller to reduce buoyancy when the pipe is less than full. This buoyancy tends to lift the inlet and float upward and can reduce flow through the skimmer.

**11. Does this reduce the flow rate through the inlet/orifice?**

No, not appreciably. When the barrel or “arm” is flat or has just a slight slope the flow rate will be just slightly constricted. Once the slope increases, say 6” to 12”, the smaller pipe will carry the flow coming through the inlet/orifice. This has been confirmed through testing.

**12. How many days should it take for the sediment basin to drain?**

That depends on where the sediment basin is located. In North Carolina it is 1 to 3 days. In Pennsylvania it is 4 to 7 days. Where there are no specifications 3 days is generally recommended.

Keep in mind that the faster the basin is to be drained, the larger (and more expensive!) the skimmer required to do it

**13. Should one or two fence posts be used to stabilize the up and down motion of the skimmer?**

Just one! This allows the skimmer to be pulled to the side of the basin for inspection or maintenance. Using a post on both sides of the pipe prevents pulling it over.

**14. What does the colored tape on the skimmer vent mean?**

The color gives the size of the skimmer. Refer to the color chart for reference. These colors have only been in use since Spring 2007.

**15. Can the skimmer be reused?**

Yes. As long as care is taken to disconnect the outlet end of the hose so it can be reused and the skimmer has not been damaged through use or removal. The skimmer is made so the barrel or “arm” can be disconnected from the inlet extension for moving and storage. It will probably be necessary to calculate and use a different size orifice when the skimmer is reused in a different basin.

Realistically, often no one is willing to get muddy disconnecting the hose, so a backhoe is used to grab the inlet to pull it loose, which breaks the skimmer.

**16. Can a skimmer that is larger than the required size (i.e. a smaller size skimmer would be adequate or is called for on the plans) be used in a basin, say if one was being reused?**

Yes, AS LONG AS the orifice is sized using the flow rate FOR THE LARGER SIZE, not the smaller size or the size specified. For example; say the erosion control plan specifies using a 3” Faircloth Skimmer with a 2.5” diameter orifice but the contractor has a 4” on hand. The 4” could be used AS LONG AS the flow rate through the 4” was adjusted by sizing an orifice based on the volume of the basin, the number of days to drain the basin, and the specifications for the 4”. Using the 4” with a 2.5” orifice would not work because it would drain the basin faster because the head on the 4” inlet is greater than the head on the 3”.

**17. What is included with the skimmer? Is it assembled?**

The skimmer included the float, the inlet, rope, the flexible hose, the orifice plug and adjustable cutter, and instructions. It does not include the barrel or “arm” because it is too long to ship by UPS. The Sch 40 PVC pipe for the barrel is readily available at local suppliers. **The exception** is the 6” skimmer which includes the 5” pipe for the barrel because it is too large to ship by UPS and has to be shipped by truck. Glue and primer are also not provided.

The skimmer comes assembled except for a couple of pieces that must be glued on.

**18. How is the skimmer attached to the sediment basin outlet?**

If there is a straight pipe through the dam, usually on small ponds or traps without riser structures, the skimmer comes with couplings to attach the flexible hose to the pipe. Couplings and adaptors may be required if the pipe is larger than the coupling on the hose.

Where the basin has a metal outlet structure, the connection can be made to a pipe stubout on the riser. On a concrete riser, a steel plate with an appropriate size female coupling welded on it can be bolted and sealed over a hole through the side.

Refer to the skimmer cut sheets and instructions on this webpage for details.

**19. Can the skimmer be used as a floating inlet for a pump?**

It has never been tested for this use. There is concern that the inlet does not sit deep enough under the water to prevent pulling air into the inlet that would break the prime.