



Centre for Affordable
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This presentation is used with Lesson
Plan 12: 8 Key Filter Performance
Points in the Biosand Filter for Project
Implementers Trainer Manual.

Available at

www.cawst.org/resources



BSF: 8 Key Filter Performance Points



Learning Expectations

1. List and describe the eight key filter performance points you can check to see if a biosand filter is working properly.



8 Key Filter Performance Points

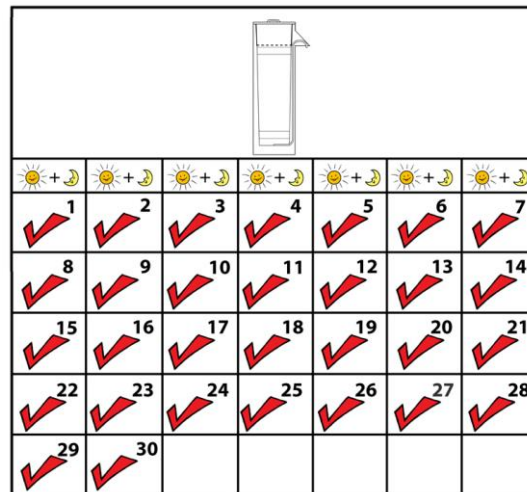
How can you tell if a biosand filter is treating water well?

There are 8 important points you can check to see if the filter is working well.



8 Key Filter Performance Points

1. The filter has been used for at least one month since installation



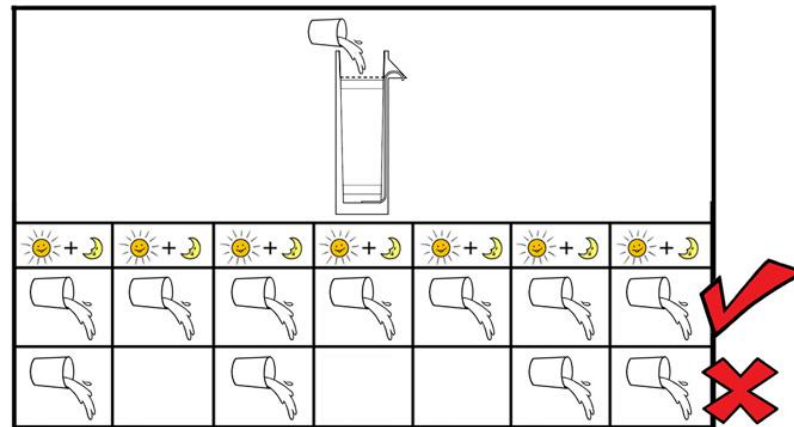
Why is this important?

The biolayer takes one month to grow. The filter is not working at its best until then.



8 Key Filter Performance Points

2. Filter used at least once a day, with water from the same source each time.

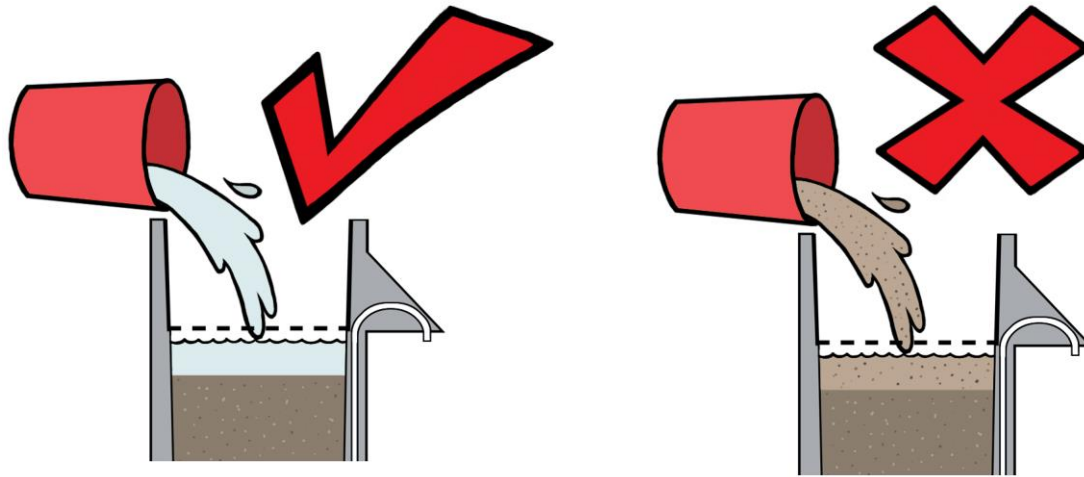


Why is this important?

The biolayer needs a fresh dose of food and oxygen at least once a day. The filter works best with water from the same source every time.

8 Key Filter Performance Points

3. The water poured into the filter is clear.



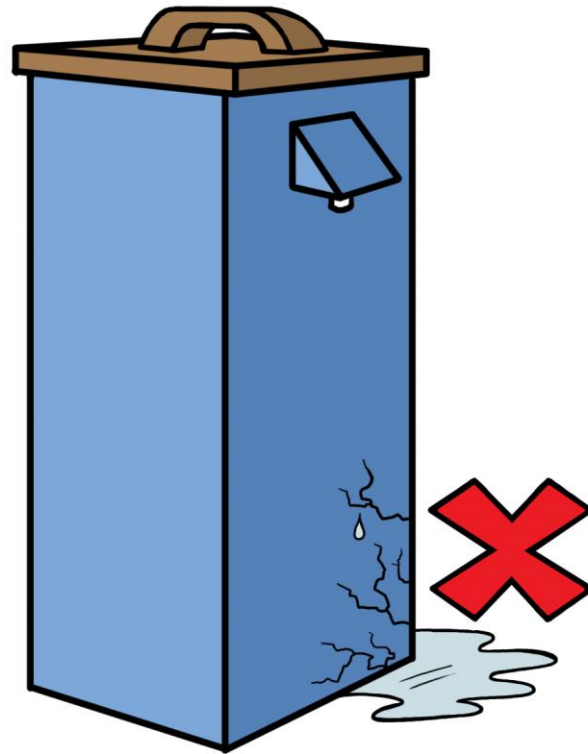
What will happen if dirty, cloudy water is poured into the filter?

The sand will clog with dirt, and the flow will become very slow.



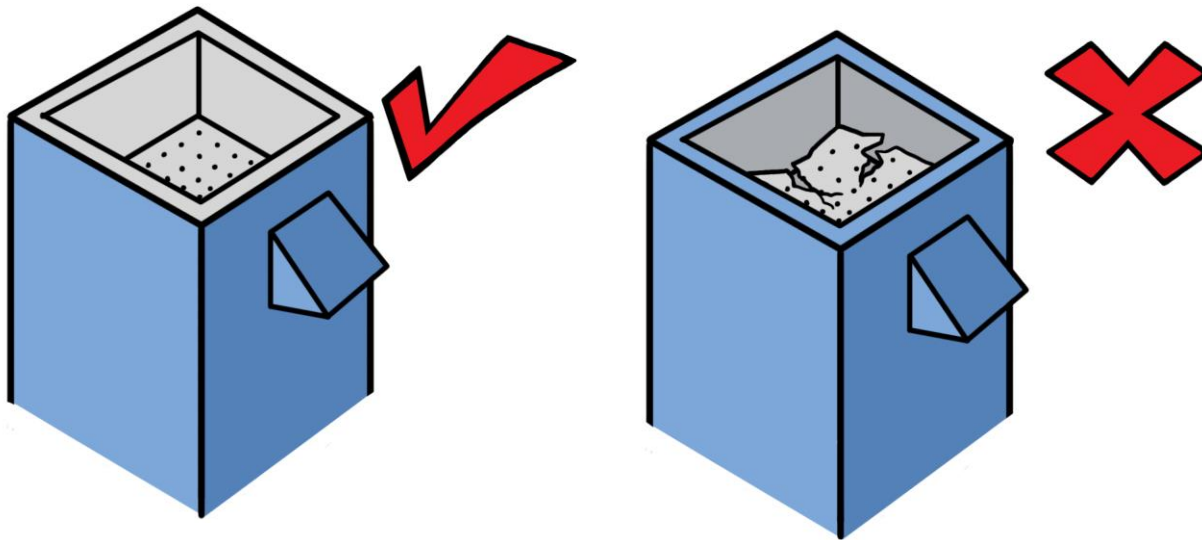
8 Key Filter Performance Points

4. No leaks.



8 Key Filter Performance Points

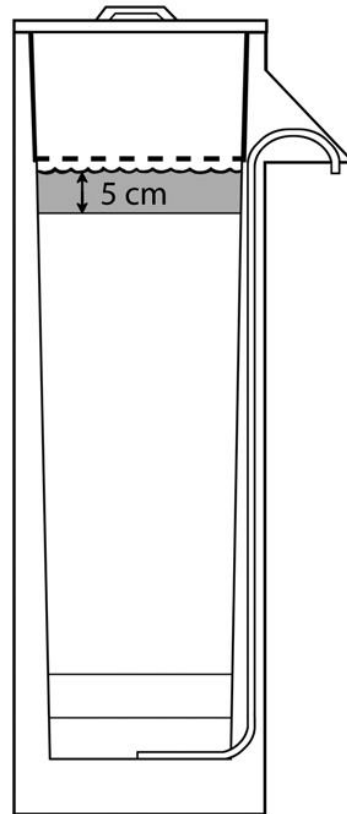
5. Diffuser is in good condition.



If it isn't what could happen?
The biolayer could be harmed.

8 Key Filter Performance Points

6. Standing water depth is between 4 cm and 6 cm.

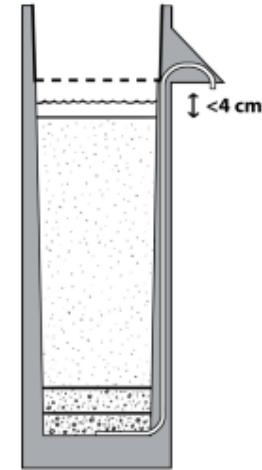


8 Key Filter Performance Points

What would happen if the water was:

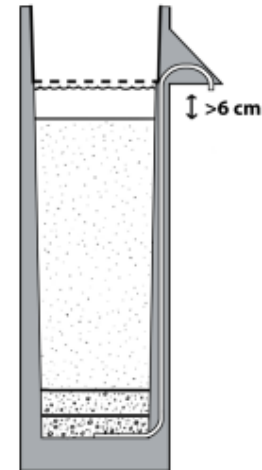
A. Too shallow?

- Biolayer may dry out and die



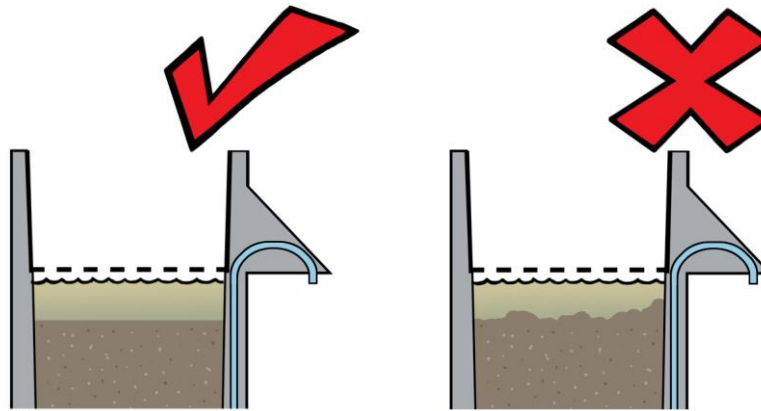
B. Too deep?

- Not enough oxygen gets to the biolayer



8 Key Filter Performance Points

7. Top of sand is level.



What does this tell us?

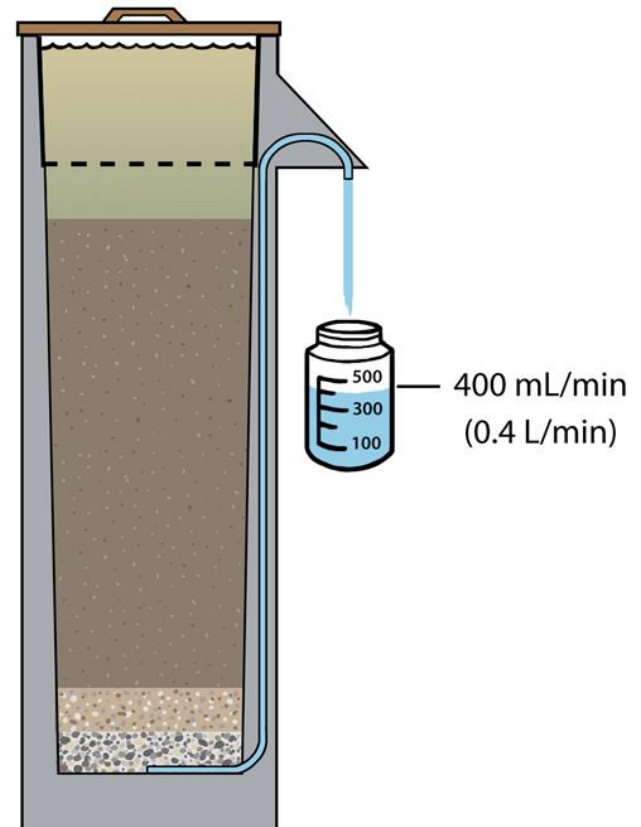
The diffuser is working well.



8 Key Filter Performance Points

8. Flow rate should be **400 mL or less per minute** (for Version 10 filters).

If you are catching the water in a 1 L bottle, it should take 2 minutes and 30 seconds or longer to fill the bottle.



8 Key Filter Performance Points

Why is the flow rate important?

If the water is flowing too fast, not as many pathogens are removed from the water.



Review

Without testing the water for bacteria, how can you know the filter is working well?

Check the 8 key filter performance points with the user.



Review

During a house visit, what 8 important points will you check to know the filter is working well?

Write a list and then we will go back to each slide to check.

