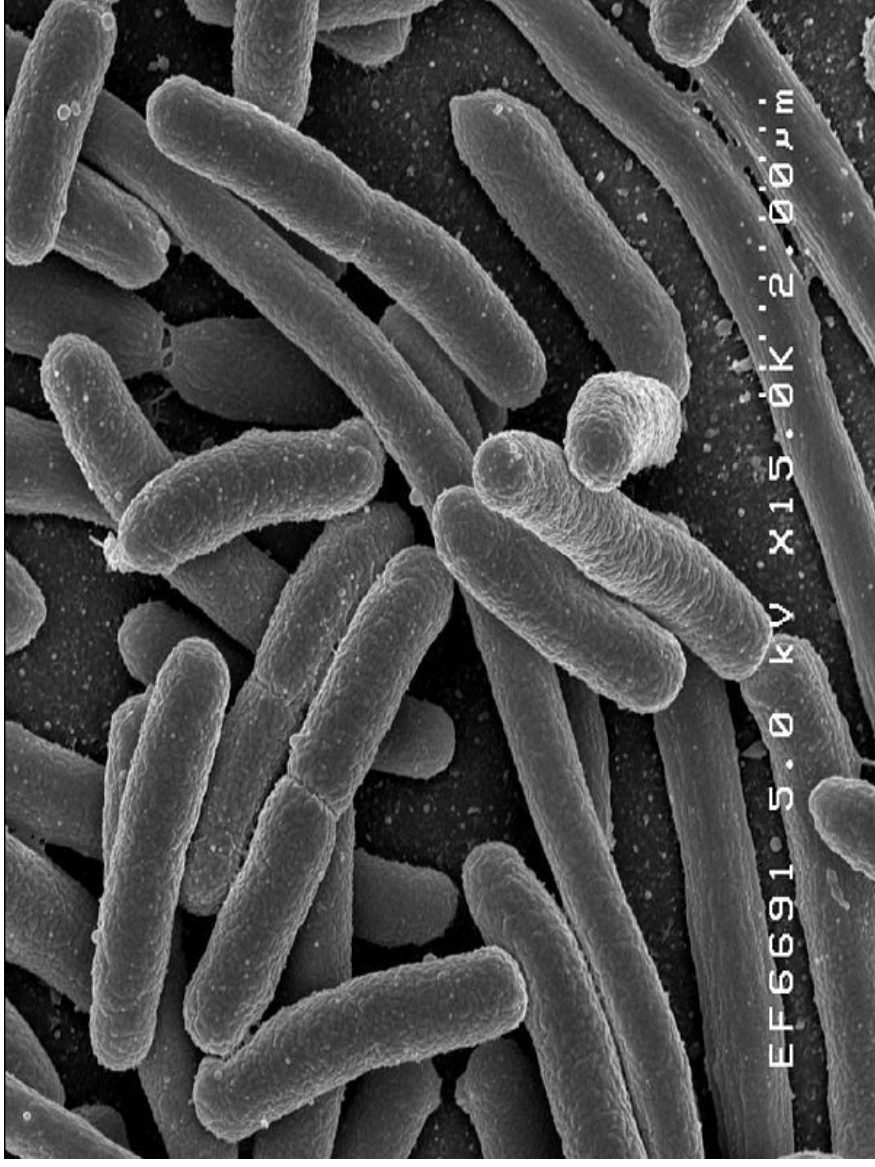


Escherichia coli

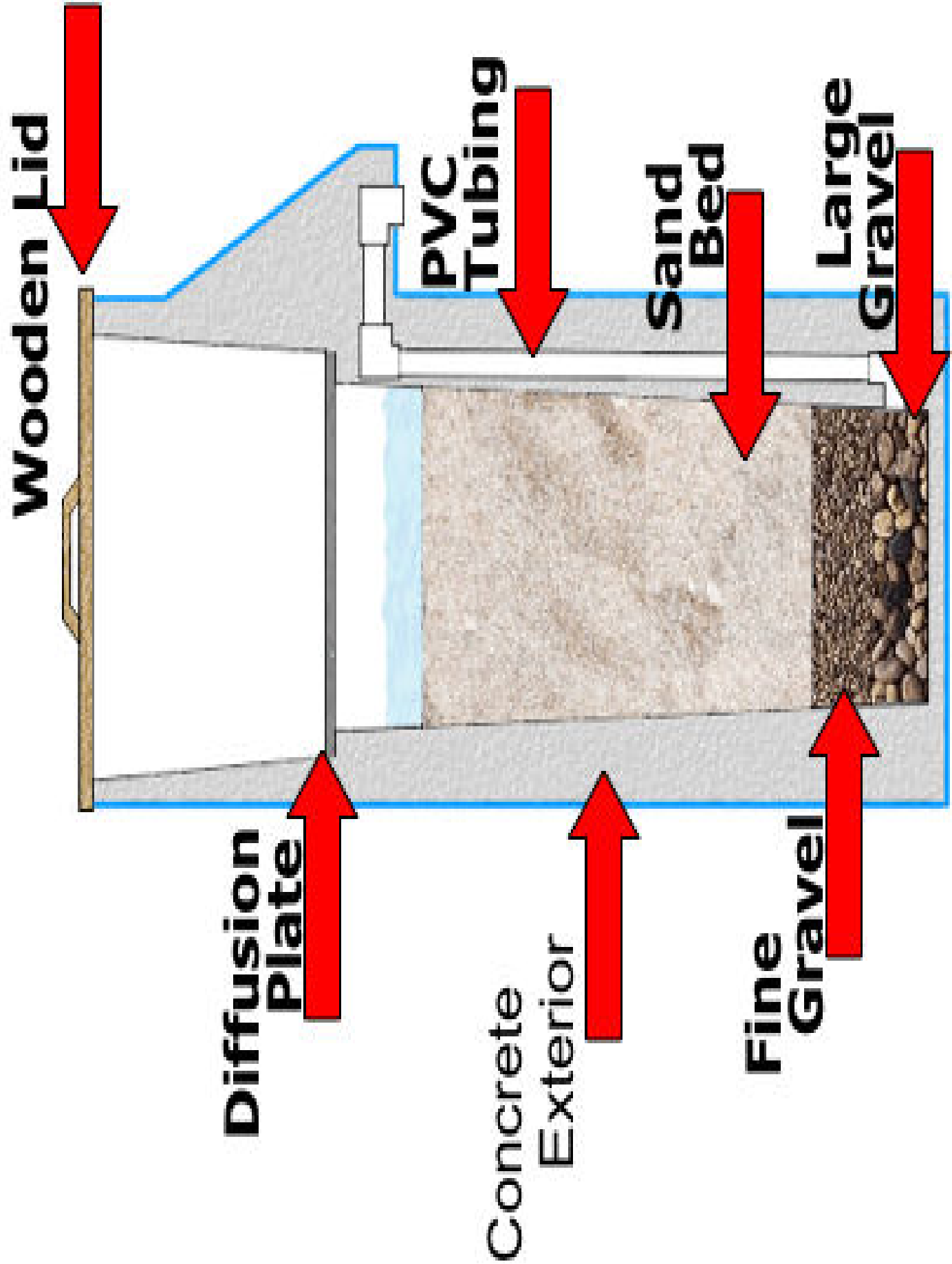


Credit: Rocky Mountain Laboratories, NIAID, NIH
http://en.wikipedia.org/wiki/Image:EscherichiaColi_NIAID.j
pg



What is a bio-sand filter?

How might we make such a filter?

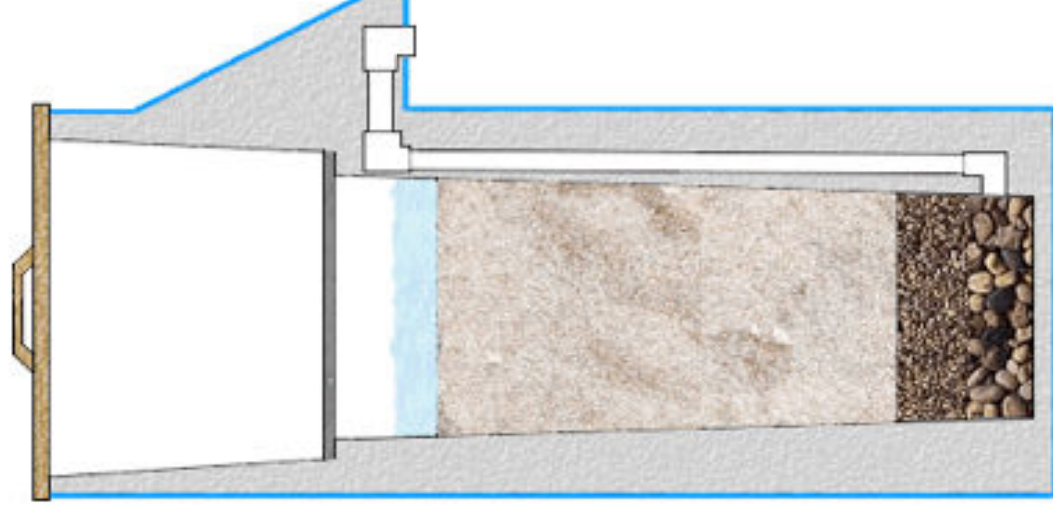


Bio-sand Water Filtration

How does it work?

4 Processes of Filtration

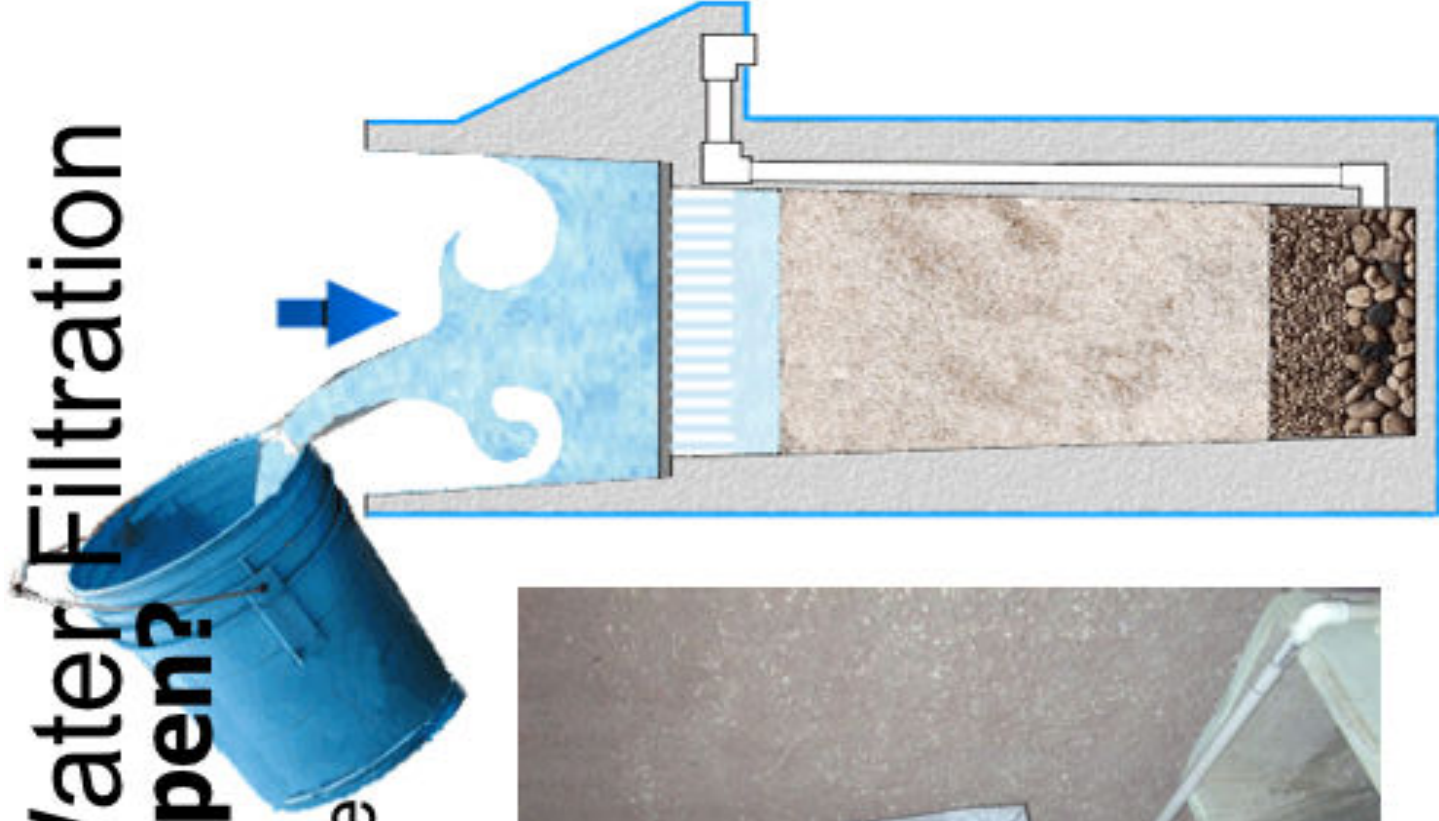
- 1. Predation**
- 2. Natural Death**
- 3. Adsorption**
- 4. Mechanical Trapping**



Bio-sand Water Filtration

How does it happen?

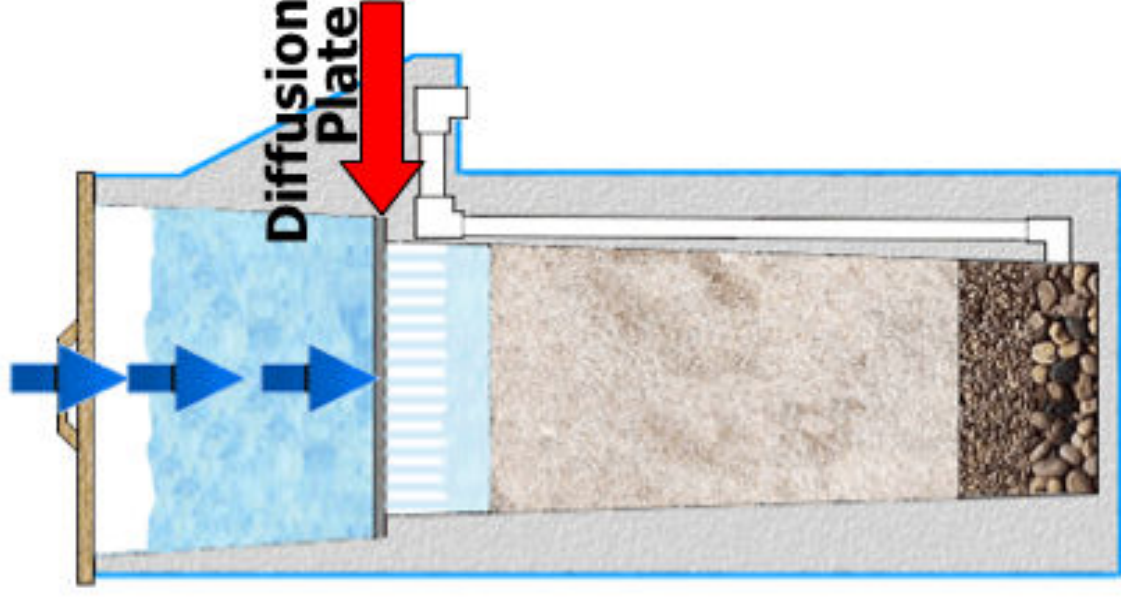
- Water is poured into the top of the Filter.



Bio-sand Water Filtration

How does it happen?

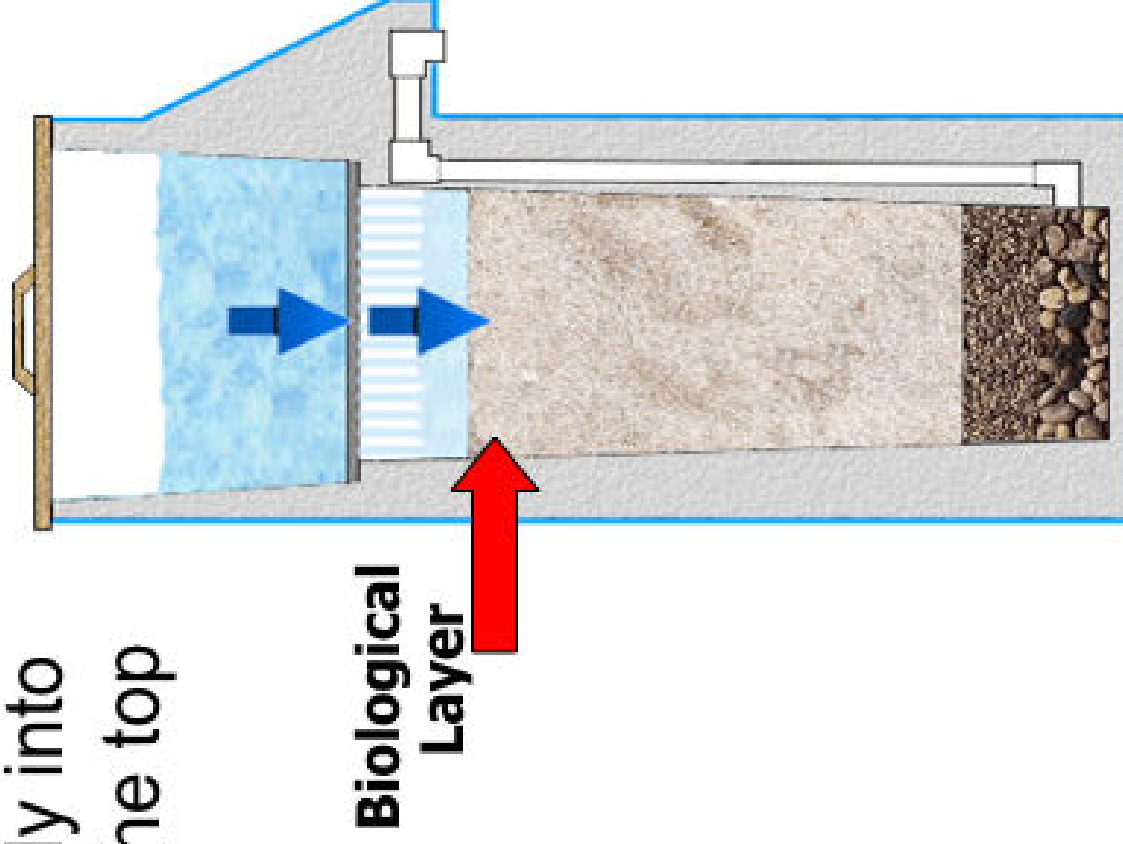
2. The Diffusion Plate slows the force of the water.



Bio-sand Water Filtration

How does it happen?

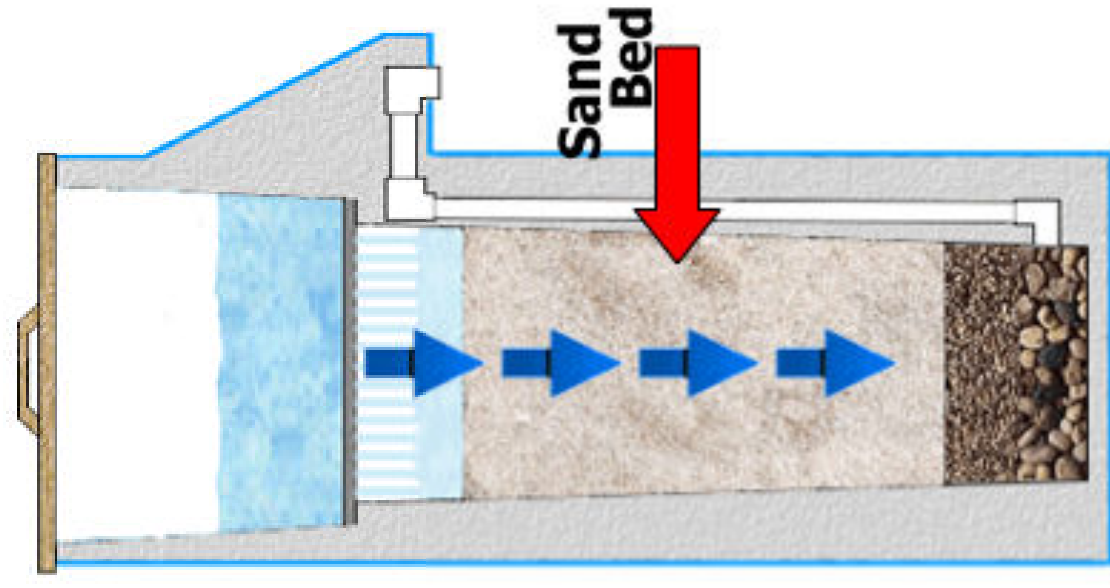
3. Water then travels slowly into the biological layer at the top of the sand.



Bio-sand Water Filtration

How does it happen?

4. Water continues slowly through the sand bed.



Bio-sand Water Filtration

How does it happen?

5. After passing through both levels of gravel, the water is propelled up and out.

