

When do I need to change my filters?

Follow the manufacturer's recommendations, but your results will vary based on how much water you use and how clean the water is to start with. Small filters usually last one month, while large filters might last as long as six months. Don't try to stretch the life of your filters by washing them if they weren't made to be washed. Reduced water pressure usually indicates one or more clogged filters. Inspect your filters regularly.

When you change your filters, be sure to also clean out the filter housing, because any bacteria in the housing will quickly contaminate a new filter.

Where do I buy filters?

Filters are available from rainwater catchment suppliers, hardware stores, and some discount and warehouse stores. Check the *Rainwater Catchment Services Directory* at www.hawaiiirain.org or the phone book for a location near you

Are filters all I need to clean my water?

No, filters are only one component of your water treatment system, and most do not remove disease-causing organisms. They enable your disinfection systems to work more effectively. Don't depend on filters alone. For more information on disinfection, please see the *Guidelines on Rainwater Catchment Systems for Hawaii*, which is downloadable from www.hawaiiirain.org.

Checklist for changing filters:

Change your filters when:

- Recommended by manufacturer
- They appear dirty or clogged
- You do not have good water pressure in your house.

For more information, contact:

University of Hawai'i, Mānoa
College of Tropical Agriculture & Human Resources
Hawai'i County
Cooperative Extension Service

808-981-5199
www.hawaiiirain.org



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RAINWATER CATCHMENT SOLUTIONS:

Filters for Rainwater Catchment Systems



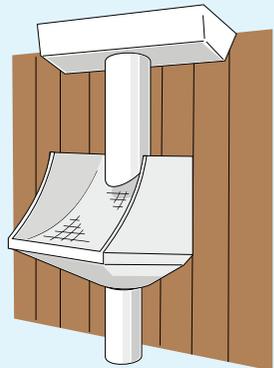
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What are filters and how are they used?

Essentially, filters are screens made of various materials including paper, string, charcoal, sand, clay, silver, and even membranes. In rainwater catchment systems, filters take particles out of your water.

What do filters do and how are they used on my catchment system?

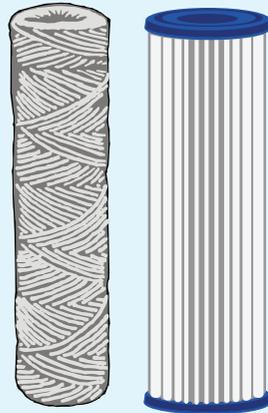
Filters are used in various locations for a variety of reasons. Typically, a home would have a screen filter before the tank, a sediment filter after the pump and maybe a fine filter at the sink. If they have water treatment systems, they may have more filters. The following are common:



Screens, foam, sock and cloth filters

Screens, foam, socks and/or pieces of cloth are usually used to keep leaves, twigs and other large objects out of the catchment water. They are usually put on gutters, downspouts, overflows, faucets and tank entrances.

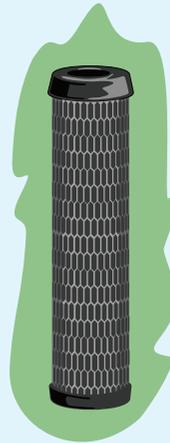
Size: 60 microns and up
Location: Before or on the tank



String and paper (sediment) filters

Remove visible sediment, silt, clay, and ash

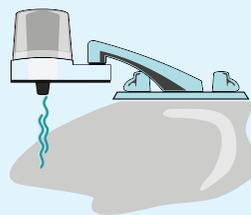
Size: 1-30 microns
Location: Point-of-entry



Charcoal and carbon block

Absorb chlorine, metals and debris with a chemical attraction which makes the water clearer. These filters are often used to remove bad taste and odors.

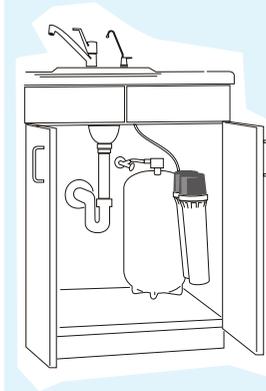
Size: 1-10 microns
Location: Point-of-entry and / or Point-of-use



Absolute 1 micron filters

Designed to keep protozoan cysts out of the water. They are often used at the sink or "point-of-use" locations, since their tiny size restricts water flow. They do not remove bacteria or viruses.

Size: 1 micron
Location: Point-of-use



Membrane filters for reverse osmosis (RO) systems

High pressure ranging from 30 to 250 PSI forces water molecules through a dense layer of polymer (or plastic) which prevents solutes, such as salt ions, from going through. Membranes are usually preceded by charcoal filters, since chlorine can damage RO membranes.

Size: .0001 micron or larger
Location: Point-of-use or Point-of-entry

What about point-of-use filters?

Besides whole-house filters (point-of-entry) for all of your household water, some people treat drinking or cooking water in additional ways. Point-of-use filters include faucet filters, water pitcher filters, refrigerator water line or icemaker filters, under-counter filters, and others. These all vary considerably. Some are 1 micron or less in size and are designed to remove cysts and nematodes that cause diseases like giardiasis and rat lung disease. Others are for improving taste and odor. Normally, their filter size is 5 microns or less. Most do not remove bacteria or viruses.