



### Screens, socks, nylon hose, and cloth filters

Screens, socks, nylon hose, and/or pieces of cloth are usually used to keep leaves, twigs, other large objects, and sediment out of the catchment water.

They are usually placed at the end of downspouts and at tank entrances.

Illustration: Kirk Johnson

### Where can I buy pre-tank filters?

Gutter and downspout filters are available from some rainwater catchment suppliers, hardware stores, and on the Internet. Check the *Rainwater Catchment Services Directory* at [www.hawaiiirain.org](http://www.hawaiiirain.org) or the phone book for a location near you.

### What pre-tank systems can't do

Remember that pre-tank screens and filters are designed to keep the water in your tank cleaner, but they do not remove pathogens (bacteria, virus, worms) that can make you sick. **You still must disinfect the water before using it.**

### Cleaner water checklist:

1. Keep plants and trees trimmed well away from your roof or other catchment areas, as well as your tank.
2. Install screens or filters for gutters and downspouts to catch debris that is blown or washed into the system.
3. Clean these screens or filters regularly to keep items from getting into the tank.
4. Don't forget: You still need to disinfect catchment water before using it.

### 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](http://www.hawaiiirain.org)**

## Clean Water Starts Before Your Tank



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Thanks to the County of Hawai'i for making this brochure possible through a grant.

Rainwater catchment is a great way to harvest a natural resource for daily uses in your home, garden, business, or community. No matter how you use catchment water, you will want to keep it as clean as possible. This process starts before water reaches your storage tank using screens and filters and other devices to keep as much debris as possible out of the tank.

## Cleaner water going in means cleaner water going out

**The first step anyone can take is to clean the gutters and roof.** The next step is to keep the roof from getting dirty in the first place. Do this by cutting back trees and plants and keeping them away from all your catchment surfaces.

**Keeping plants away helps prevent leaves and plant debris from falling on your roof and getting into your tank.** In addition, it keeps animals and insects from crawling up onto your roof and defecating, which introduces bacteria into your water tank. Also, some plants are toxic or affect the taste and odor of your water. Never plant poisonous plants anywhere near your water system.

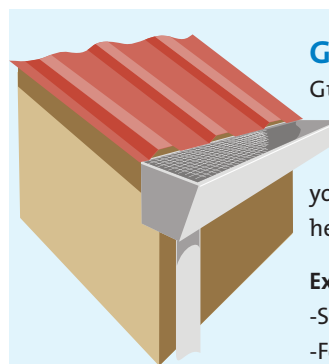
Of course, sometimes debris blows onto your roof or into your gutters. **That's where pre-tank screens, filters, and other devices can help,** because they can catch these items before they get into the water tank.

## Help your pump, filters, and equipment

While your post-tank filters and disinfection process are what make the water clean and safe to drink, they last longer and work more effectively if the water has less debris to begin with. That means you save money, and the water will also be of better quality if you take steps to clean it before it goes into the tank.

Pre-tank filters can keep out large debris such as sticks and leaves, which disintegrate in the tank water and become food for bacteria.

**Here are some helpful pre-tank filters to choose from:**

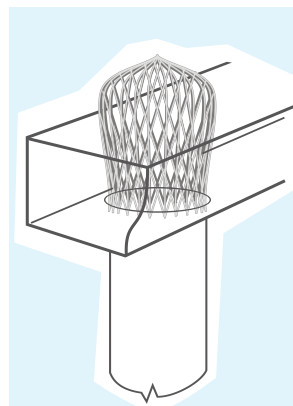


### Gutter screens

Gutter screens keep leaves, twigs, and debris that blow onto your roof or into your gutters out of the water heading into your tank.

#### Examples:

- Screens over gutter
- Foam screen for gutter

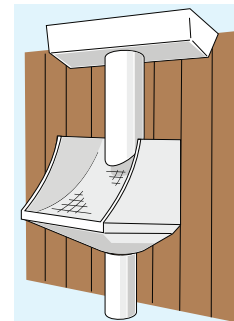


### Downspout top screens

These screens are installed at the top of the downspout where it connects with the gutter. They collect debris from the gutter before it gets into your downspout.

#### Examples:

- Dome type
- Wedge

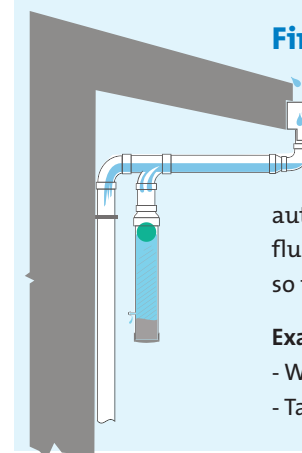


### Downspout screens

Downspout screens catch debris in your downspouts before it gets to your tank. These screens are easy to care for because they are usually within reach and cleaning them out does not require a ladder.

#### Example:

- In downspout screen

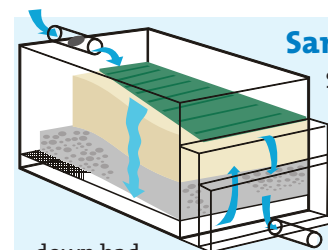


### First-flush diverter

The first flush of rain washes much of the debris and contaminants off the roof. This system automatically diverts the first flush of rain away from the tank so the tank stays cleaner.

#### Examples:

- Wall-mounted
- Tank-mounted



### Sand and gravel filter

Sand and gravel filters work by creating environments where good, healthful bacterial growth is encouraged to break down bad, illness-causing bacteria. Sometimes a layer of charcoal is added to help improve taste and odor. Sand and gravel filters are usually used with in-ground tanks so gravity feeds the water down. They are slow filters and usually not designed for the average household water flow rate.

#### Examples:

- Slow
- Fast