

Consider collecting rainwater; a win for you, Melody Woods Water and your plants!

Why Care?

Being from Sweden I like to state: "Melody Waters is to water what the Swedish Government is to booze; they both will reluctantly sell you the liquid but really do not want you to buy and for sure not in any big quantities". And in Melody Waters case they also do not want you to use it for irrigation purposes :). Further note the fact plants are generally more happy getting natural (rain) water than purified drinking water. Collecting rainwater for irrigation also helps you take the edge off your water bill (as you know, those last units really rack up as each unit is 100 dollars at this point for our community). So **saving on drinking water, making plants happier and having more money left in the wallet is a no-brainer win-win-win** hence I just took the plunge installing a rain collection system for my property and wanted to share some hopefully useful details and inspirational pictures in case you are enticed to consider doing something similar. Enjoy,
-lars

Our setting; living on a mountain slope property helps!

Our property have limited space so could not get any of those 5000 to 10000 gallon big water tanks (besides they are a bit of an expensive option anyway and I really wanted something simple by utilizing the fact we are on a hill and can get self pressure and no need for pumps that may clog, break or lose power) so instead bought and installed what is known as 275 gallon IBC Tote tanks and serial connecting them using garden hoses. Ended up with tanks organized in two areas to enable watering all of our property. One area is very shaded so opted to not cover tanks instead planted bamboo around them while for the other area we bought covers in green so they melt into the nature/background. See pictures. Here some likely questions we expect you may have after seeing it:

Q: How long to break-even on this and what is cost-per-gallon?

A: In our case we expect to make the investment back in 3 to 4 years as this will take 100 to 200 dollars off our water bill for 7 months each year. We are one of Melody Waters ~~best~~ biggest customers. Total investment cost for us around 75 cents per gallon of rain water stored (got 15 tanks/4100 gallon and 3000 USD invested). Note you can probably do it for half of that if you want to go cheap on the quality of IBC tote tanks and couplings...but we really did not want some stinking and/or discolored tanks as we intended to not cover them and are located, close to house so went with food grade tanks (meaning, used only one time and only for food - ours have had soy sauce in them). You can probably find/negotiate food grade tanks down to 125 USD including delivery on craigslist if you buy 6 or more.

Q: How much rainwater can one collect?

A: According to our reputable source (google search) it states one can collect 600 gallon water per 1000 square feet of roof per 1 inch of rain received. Lexington Hills apparently receives an average of 42 inch of rain yearly. Meaning, you could collect 24000 gallons a year if you have a 1000 square foot roof area that can be used to collect from. That is likely more than you ever need for irrigation. Another way to think about it and that we came up with: for each foot of roof width you have (assuming the roof is more than 10 feet in height length from the gutter up to the top of your house) you can install and fill one 275 gallon IBC tank without problem each year. So a 20 feet deep garage = 20 tanks easily filled. That sort of helps you figure out how much of your actual roof needs to be part of your rain collection system (in our case perhaps 30% is).

Q: Tips on IBC tanks?

Yes; all IBC tanks seem to come with a top lid so you do not need to worry about that part. 275 gallon tanks are common (330 exist but way less common). 275 gallon tanks are created in a standard size: 40 inch wide, 48 inch deep and 46 inch high. Note they bend out a bit when filled (and metal cage may not be totally straight when you get them) so add 2 inches to width and depth for each tank when you figure out your placement space needs. Further note: depending on what tank you get they can come with 1 of 3 different types of couplings (Cam, fine or coarse thread) which is what you need to convert to a garden hose outlet so make sure you know what kind of connections your specific tanks will have so you do not buy wrong connectors. I would recommend you avoid Cam connections (got a few, not at all as tight as fine or coarse thread connectors).

Q: Tips on hardware used?

A: We bought 95% of hardware on [Amazon.com](https://www.amazon.com) and again went upscale (as one single line/coupling leak mean all tanks will end up empty as they are serial connected) so bought garden hoses pre-made at proper length (you need at least 3.5 feet to serial connect tanks and online you can buy 4 feet pre-made). We went with a large garden hose diameter (3/4) that is also pre-made with such size on the full inside including couplings with the thought it may be

useful so water can flow at a higher rate between tanks if heavy rain. You also need garden hose "Y" splitters(see below). If you intend to reserve some tank as backup for drinking water (we did that and have extra water filters that fit on garden hose outlets) you should ensure relevant couplings for that part of your system are lead free/BPA drinking water approved.

Q: Tips on tank covers?

A: Unless you have a super shady place in mind you absolutely want to get covers for tanks to limit UV light (and algae/bacteria growth) and for that please note the price difference is huge between sellers but if you spend some time you can likely find sellers both on Amazon and eBay that in essence ship straight from China which significantly lower your cost if you can wait a month (we did). We also read enough articles that stated painting tanks is a bad idea as pain can bleed through plastic into the water even if you go with food grade tanks so we ruled out the (cheaper-than-buy-covers)paint option.

Q: Tips on installation?

A: Yes. Earthquakes are a real thing around here! :) Although we were not here when The Loma Prieta earthquake created huge havoc literally across the street from us on Summit Rd in 1989 we certainly do not want tank water flood into our garage or our neighbors downhill so have set up tanks so they can roll/move slightly if an earthquake by putting a border about an inch wider than tank at bottom of tanks in form of large screws where we had wood base and 4 feet rebar or treated wood into ground were we had dirt as base. You likely also do not want to get pine needles and other stuff into tanks so consider 2 barriers to stop that; 1. at least get the 6 inch stainless steel grid lid (on Amazon and specifically made for IBC tanks used for collecting rainwater) plus, for extra points, 2. put a micromesh gutter guard over your gutters. Saves you some work each year anyway right. The latter can cost you anywhere from 50 cents to 4 dollar a foot depending on how fancy you want to be re: color match, longevity and fit relative to what type of profile your gutter has (K-profile or round, 4/5/6 inch wide etc).

Q: Tips on permit needs?

A: We heard through the grape wine if you have less than 10000 gallon tank no permit needed. We opted to not double check and took the info at face value. You are recommended to do your own homework on this if it is important to you.

Q: Tips on garden hoses?

A: THE key tip is; unless you have a 30 foot high house and can put the tanks at that height :) your water pressure will be much less than what you get from regular Melody Water lines. Hence using garden hoses that automatically expand and crawl-up once you empty them for water is not recommended. You may be able to if you have a 14 foot drop (from bottom of lowest tank to where you intend to water). We opted to buy a retractable-on-a-reel garden hose.

Q: Links to all material you bought?

A: Sure, here you go:

[IBC Tote Tank 275 Gallon on Craigslist](#)

[IBC Tote Water Tank Cover for 275 gallon / 1000 liter](#)

[IBC Rain Barrel Screen lid](#)

[275 IBC Tote Water Hose Male Adapter \(2 inch Cam Lock\)](#)

[275 IBC Tote Water Hose Male Adapter \(2 inch course thread\)](#)

[4 feet Garden Hose](#)

[3/4" Brass connector](#) (if you buy 4 feet pre-made garden hose you need this)

[2 Way Garden Hose Splitter](#) (between tanks)

[4 Way Garden Hose Splitter](#) (at least on one tank to connect final outlets to)

[Garden Hose Reel](#) (overpriced; buy it from China directly and save 100)

[Gutter Micro Mesh for 5 inch gutter](#) (for show / front of house and color match)

[Gutter Micro Mesh for 5 inch gutter](#) (for back of house; 60% cheaper)

[Flex-Drain \(for line from existing roof drainage in ground to tanks\)](#)

[Flex-Drain Pipe Connector](#)

[Garden Hose Water Filter](#) (only if you plan use for emergency drinking water)

Q: Can you help me get going?

A: You are a neighbor so of course! Note we do not have time to help you build a system but we are happy to stop by your property for a few minutes for a general consultation based on our experience; our going rate is a plain coffee(weekdays) and a coffee with milk (weekends) :).

-Lars



Lower Tank Bank – Front View



Lower Tank Bank – Side View



Upper Tank Bank