

Oasis Water Harvesting

Overview of Various Systems

After installing rain water catchment systems for the past few years I have broken down the types of systems into 3 main categories. This is not to say that there might be hybrids of these three main types as individual needs and situations vary from person to person. Below is a brief description of each with reasons and advantages of each.

Stand Alone – The simplest and easiest way to start catching and using rain water. This is where you have one or more tanks placed under your down spout(s). Each tank is treated as its own entity and is used to water plants in its own proximity. The advantage of this style is the ease of getting started. Most customers will set down a pad of pavers to place the tanks on but good clean dirt, sand or pea gravel will work just fine also. Just see that there are no sharp rocks under where the tank will be placed.

Linked Systems – By taking the time and effort to “link” your containers together it will give several advantages. Oasis containers are linked using 1-1/2” PVC pipe. This good size pipe allows for excellent transfer of water between tanks even when just using gravity. Some other manufacturers use garden hose, which in a lot of Arizona rain events just can not handle the volume of water in a short time period. When linking tanks together always keep the tops at the same height. If one tank has a lower top than the others, that lower tank will be the water level when the system is full. This would reduce the potential capacity that you have in the other tanks. The Oasis 65 gallon and 200 gallon tanks work well together because they are both 48” tall.

Linking tanks can be a matter of adding additional tanks to a tank that is already under a single downspout, this increases capacity of storage for a single downspout. This is a good idea for that one downspout that always seems to have a lot of water pouring out of it; it is simply servicing a larger roof area than other downspouts. Another scenario of a linked system is to link tanks together that are under different downspouts. This will balance your system. In other words if some downspouts have more water coming down them than others the water will migrate through the underground pipe system so the system fills evenly. Once you have a number of tanks that are linked together you have the capacity that might warrant placing a small pump inside one of the tanks that could pressurize a garden hose. This makes it very convenient and saves time when you want to water your plants. For this system the containers around your house, under your downspouts is your capacity.

Complete System – This is taking a linked system as noted above to the next level. Here is how you can store a larger quantity of water by incorporating the really big tanks. We’re talking about 1,100; 1,550; 2,500; 3,000, or even 5,000 gallon tanks. They are not the most aesthetically appealing containers to look at but for storing a large quantity of water at the most affordable price they have their advantages. Once you have a linked system around your house of the decorative Oasis tanks, it is not that much more of a step to add this mega storage to your system. The best part is you can place this large tank anywhere you want, it does not have to be near the house. It can be placed behind a wall or row of plants, in back of the garage, or any low traffic or visual area.

For this system smaller tanks (65 gallon work great) are placed under all downspouts except for one. Under that last downspout is placed a 200 gallon tank. The 65 gallon tanks have 1-1/2” drains at the bottom which are all linked to the bottom of the single 200 gallon tank. Inside the 200 gallon tank is a ¾ hp sump pump with a float activated switch. A 1-1/2” pipe comes out of the pump (44 gallons per minute rated at no lift) and then enters into the top of your large storage tank(s). When it starts to rain water enters the “system” around your house. Once the float on the pump rises it turns on the pump moving the water into the large tank. As the 200 gallon tank tries to empty, water migrates by gravity from the other tanks towards the 200 gallon tank. When the rain stops the pump continues to work until the float drops down thus turning off the pump, and waits for the next rain. On my 2,000 square foot roof it takes 2-1/2” of rain to fill my 3,000 gallon tank (that tank is 8’ wide and 9’ tall). I then use a 1 hp shallow well pump to pressurize my water line coming out of the 3,000 gallon tank to my gardens and drip system. This pump is an on demand pump. When you open a faucet or your drip system timer opens a valve the pressurized tank that is a part of the pump goes from 50 psi to 20 psi which triggers the pump to turn on supplying 20 to 25 psi while in use. Once the water is turned off the tanks is pressurized back to 50 psi and the pump turns off.