

## SECURING YOUR RAINWATER HARVESTING SYSTEM

### 1. Place Tank Near a Wall:

- Position free-standing tanks close to a building wall for added support.

### 2. Use a Stable Base:

- Place tanks on a sturdy flat surface, preferably on a ground level platform or a suspended concrete or metal platform, or on stacks of woven concrete blocks with a plywood surface. For woven concrete blocks avoid heights above 36 inches for free-standing tanks.

### 3. Add Support:

- Use timber or concrete kerbs around the tank base to prevent sliding.

#### *Tie Down Eyes*

*Secures the tank during heavy winds*



### 4. Prevent Toppling in High Winds:

- Install a metal or well-constructed timber thrust prevention rail about  $\frac{3}{4}$  of the height of the tank from the base upward.
- Secure with flat straps in at least 3 directions about  $\frac{3}{4}$  of the way up the tank. Straps may also be on top of the tank in a crisscross pattern.

### 5. Build a Protective Wall:

- If possible, construct a lightly ventilated concrete curtain wall around the tank, leaving 12 to 36 inches space for human access around the tank.

### 6. Secure Water Pipes:

- Bury or hide pipes leading from the tank to prevent damage.



### 7. Use Detachable Unions:

- Install detachable unions on pipes to easily disconnect and secure them before a storm and reattach afterward as depicted in the picture.

*In a world thirsting for change,  
be a **Water Hero!***



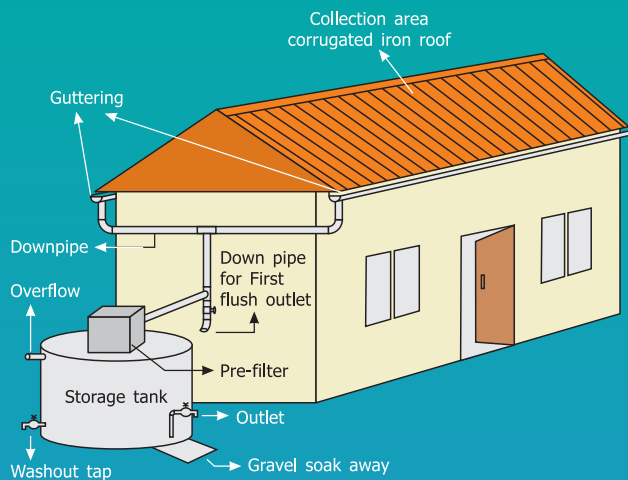
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HOW TO SET UP  
YOUR RAINWATER  
HARVESTING  
SYSTEM AT HOME



## WHAT IS RAINWATER HARVESTING?

**Rainwater Harvesting (RWH)** is the practice of collecting and storing rainwater for later use, typically from rooftops or other surfaces. Instead of letting rainwater runoff, it is gathered through a system of gutters and pipes and directed into a storage tank, cistern, or underground reservoir.

Rainwater harvesting is a crucial method for enhancing water security and ensuring a reliable supply for households and agriculture.

## WHY RAINWATER HARVESTING?

- **Saves Water:** It's a sustainable way to supplement your main water supply, especially during dry spells, droughts or water shortages.
- **Reduces Flooding and Erosion:** By capturing rainwater, you can help prevent excess runoff, which can lead to flooding and erosion.
- **Cost-Saving:** Rainwater is free and using harvested rainwater for non-potable purposes (like irrigation, cleaning, or flushing toilets) can lower your water bill.

## COMPONENTS OF A RAINWATER HARVESTING SYSTEM

### 1. Catchment Area

Typically a roof, pavement, or similar structure. Use coated galvanised or concrete materials for drinking water. Asphalt shingles are not recommended.



### 2. Conveyance System

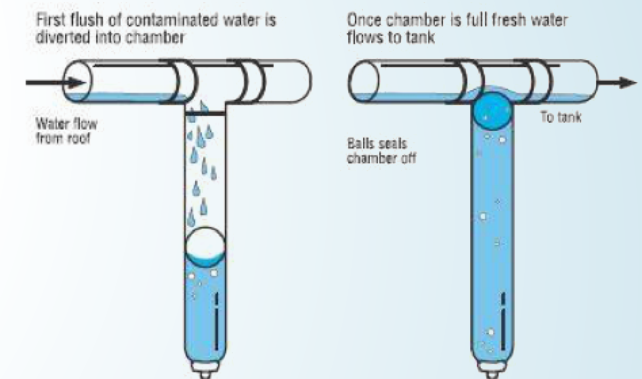
PVC or metal gutters, concrete gullies, channels, or pipes to direct water flow.

Fit your guttering system to capture as much water as possible; 6-inch gutters for large roofs, 4-inch gutters for small roofs.

### 3. First Flush or Leaf Eater or Filtration System

A system that diverts or filters out the first rainwater flow to remove debris like leaves and other particles.

Ensure that the first flush or leaf eater system is installed between the downpipe and the storage tank to remove as much impurities as possible.



*Diagram showing a first flush system*

### 4. Water Storage

Polyethylene tank, metal tank or a concrete cistern can be used to store harvested rainwater.

Placing your tank higher than the area where the water will be used in your home will ensure that the water flows with gravity, avoiding the need for a pump.



### 5. Distribution System

Pipes and taps may be strategically placed to distribute water where needed.

**Pump (Optional)** - If the water supply system isn't gravity-fed, a pump can be used to distribute water to higher elevations. Solar-powered pumps are proposed for reducing CO2 emissions.