Plan now for rainwater harvesting

Calculating Area

Calculate roof top size in square feet

\[ A = L \times W \quad \text{area of a rectangle} \]

\[ C = \frac{1}{2} AB \quad \text{area of a triangle} \]

How much rainwater can I harvest?

A 1000 square foot roof delivers 620 gallons of rainwater for every inch of rainfall. In the bay area we usually get up to 20 inches of rainfall during the rainy season. Now you can do the math for your roof.

First Flush

Depending on site conditions, between 1 and 10 gallons is “flushed” for every 1000 sq ft of catchment surface.

Sizing first flush chamber

4" pipe holds .55 gallons per foot
3" pipe holds .30 gallons per foot

\[(\pi \times \text{radius squared} \times \text{length of pipe} \times 12 = \text{cubic inches}/277.42 = \text{gallons})\]

ex. \[3.14 \times (2 \times 2) \times 10 \times 12 = 15072\]

\[
15072/277.42=5.43
\]

Outlet to tank

Inlet from downspout

Floating Ball isolates debris below

First flush chamber (length varies)

use triple-wall drain pipe—keep pipe as long as possible.

Cleanout plug drilled with drip tube inserted

Drip emitter slowly drains chamber. Tube carries water away

Catchment options

Rainwater H₂OG
Rain barrel
Bushman Tanks
Metal Tanks
Large-capacity direct burial tanks

Down spout connection options

See samples

Over flow to be diverted back into your drainage system or to special place in garden to recharge your local watershed.

Delivery options

Basic—gravity flow average of 5psi. Connect drip tape to surface catchment container and manually turn valve on and off

Moderate—use pump attached to surface catchment container and standard drip system and manually turn pump on and off.

Standard—this system usually requires more water containment as this system tends to use more water. Use Ecotronic pump with along with valves and an irrigation controller and standard drip system.

The Urban Farmer Store's
3” First Flush Diverter Kit
for rainwater harvesting applications

Kit includes everything except the pipe

Inlet from downspout

Outlet to tank

Rubber Gasket Seat

Floating Ball isolates debris below

First flush chamber

(length varies)

use triple-wall drain pipe—keep pipe as long as possible.

Cleanout plug drilled with drip tube inserted

Drip emitter slowly drains chamber. Tube carries water away

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