

Rain Harvesting Calculator for Flagstaff, AZ

Potential Flagstaff Collection

Flagstaff annual precipitation-----21.86 inches over last 30 years

.6 gallon/sq ft/inch of rain = in Flagstaff 13 gallons /sq ft/yr

600 gallons/1000sq ft/ inch of rain =in Flagstaff 13,000 gallons/1000 sq ft/yr

When loss due to wind, evaporation, over splash, overflow, first flush systems, and filters is accounted for with the formula $.5 \times 21.86 \times 1000$ we get:

Actual Flagstaff Collection

10.93 gallons/ sq ft/ yr

10,930 gallons/1000 sq ft/yr

Actual average collection in Flagstaff per 1000 sq ft

March- April =1750 gal.

May June = 530 gal.

July-October = 5135 gal.

November - February = 4195 gal.

Average annual actual gallons/1000 sq ft/ month in Flagstaff

Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
1065	1160	1120	630	315	215	1180	1730	1280	945	905	1025

First Flush Sizing

Minimal Pollution - open field, no trees, no heavy industry

Divert .0125 gallons/ sq ft or 12.5 gallons /1000 sq ft

Heavy Pollution - Trees, birds, insects , heavy industry

Divert .05 gallons/sq ft or 50 gallons/1000 sq ft

3" PVC= 1 gallon/3 ft

4" PVC= 2 gallons /3 ft

6" PVC= 3 gallons/ft

12" PVC=6gallons/1 ft