

## **Appendix D: Results of Christina Basin Rain Barrel Survey**

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### **Introduction**

The University of Delaware, Institute for Public Administration, Water Resources Agency distributed approximately 166 rain barrels to homeowners throughout the White Clay Creek and Christina River watersheds near Newark, Delaware. The U.S. Environmental Protection Agency, Delaware Department of Natural Resources and Environmental Control, and Pennsylvania Department of Environmental Protection provided funds for the rain barrel program through a Clean Water Act Section 319 grant. Over the summer of 2002, the project provided free rain barrels to interested homeowners to collect rain water to be used for activities such as watering plants and lawns. The rain barrel program continues to be a part of an implementation strategy carried out by the Christina Basin Clean Water Partnership: a cooperative effort between the states of Delaware and Pennsylvania.

The purpose of the rain barrel program is to encourage water conservation and provide a forum for watershed education and community participation. As the summer of 2002 coincided with a record-breaking drought in northern Delaware, homeowners had newfound opportunities to store water in between the infrequent rainstorms. The rain barrels became the focus of a public education effort where friends, neighbors, and family heard of the program and expressed interest in obtaining their own rain barrel. Delivery of rain barrels to various neighborhoods encouraged community participation in neighborly watershed management as the public tried to do their part to conserve water. The interest in the rain barrel program by homeowners outpaced the available funds by at least a 3 to 1 margin.

The rain barrels are 50 gallons in capacity and were recycled by the vendor from Greek pepper barrels. The barrels were steam cleaned and holes were drilled for the various outlet fittings. A screened cover was installed on the top of the barrel to keep out debris, insects and leaves. The rain barrels were delivered via truckload or parcel service at a cost of \$50 to \$60 per barrel from the vendor:

Brett Anderson, Midwest Internet Sales  
Phone: 877-888-5609  
Email: [info@midwestinternetsales.com](mailto:info@midwestinternetsales.com) Web: <http://www.rainbarrelsandmore.com>

Throughout the fall and winter of 2002, a survey was distributed to all participants to summarize their opinions on the experience of having a rain barrel. Within this report are included the compiled results of the surveys.

### **Methods**

In order to tabulate the data from the 71 surveys received, the answers were divided into categories and transferred into a spreadsheet that was used to determine the results. The following questions were used in the survey:

1. Where did you learn of the Christina Basin Rain Barrel Program?
2. Did you collect rainwater in any fashion before participating in the Christina Basin Rain Barrel Program?
3. Describe in a few sentences how you have connected your rain barrel in your yard.
4. Were there any problems in constructing your rain barrel system? If so, please explain.
5. How many gallons of water (estimated) have you collected since you received your rain barrel?
6. What have you used your saved water to do?
7. Have you had any problems with the appearance of your rain barrel? If so, please explain and provide preferences for other colors.
8. Do you feel posting the “Participant in Christina Basin Rain Barrel Program” sign was helpful? Any concerns or comments?
9. Overall, are you pleased with your rain barrel?
10. What have you learned from the experience of having a rain barrel?

## **Results**

Figure 1 shows the different places that participants heard about the Rain Barrel Program. In order from most to least used method of recruitment was newspaper/radio (25%), civic association newsletter (18%), neighbor/co-worker/friend (14%), University of Delaware Water Resources Agency (10%), Master Gardeners Program (9%) and mail, Delaware Nature Society, water utility bill and other (6% each).

Only 30% of those with a rain barrel had collected rain water before while it was the first time for 70% as seen in Figure 2.

Figure 3 summarizes the connection devices used to set-up the rain barrels. Eighty-two (82%) of those surveyed put the barrel directly under the downspout, 10% used multiple barrels or collection devices, 7% used an interconnection device from the downspout to the barrel and 1% used a different technique.

While 62% of individuals had no problems with the construction of their barrels, 35% had difficulties with the sealing and valves and 3% had parts missing as displayed in Figure 4.

Figure 5 quantifies the number of gallons of water collected from the rain barrel since installation. Six people estimated 0 –99 gallons collected, twenty seven estimated 100- 199,

eleven estimated 200 – 299, seven estimated 300 – 399, five estimated 400- 499, one estimated 500 – 599, four estimated 600 and over and eight were unsure as to how much they collected.

Figure 6 shows that 57% of survey participants used the water they saved to water plants, shrubs or trees, 33% watered gardens, 2% watered lawns and 8% used the water for other purposes.

While 83 % of people did not mind the appearance of their rain barrel, 17% did mind the appearance as summarized in Figure 7.

If the color of the rain barrels was to change as in Figure 8, 66% would like it to be green, 28% would prefer brown and 6% like white.

Figure 9 describes answers to the question: "Was posting the Christina Basin Rain Barrel Program Participant sign helpful?" Thirty-four individuals answered the question yes, 17 said no, 6 were not sure and 11 did not post a sign.

Every single person (100%) surveyed agreed that they were pleased with their rain barrels in Figure 10.

Figure 11 categorizes the most popular responses to the lessons learned from using a rain barrel. Twenty-five participants were surprised at how much water they collected, 17 thought it was great to reduce water usage during the drought, 16 were so pleased they would like another and 7 were surprised at how easy the process was.

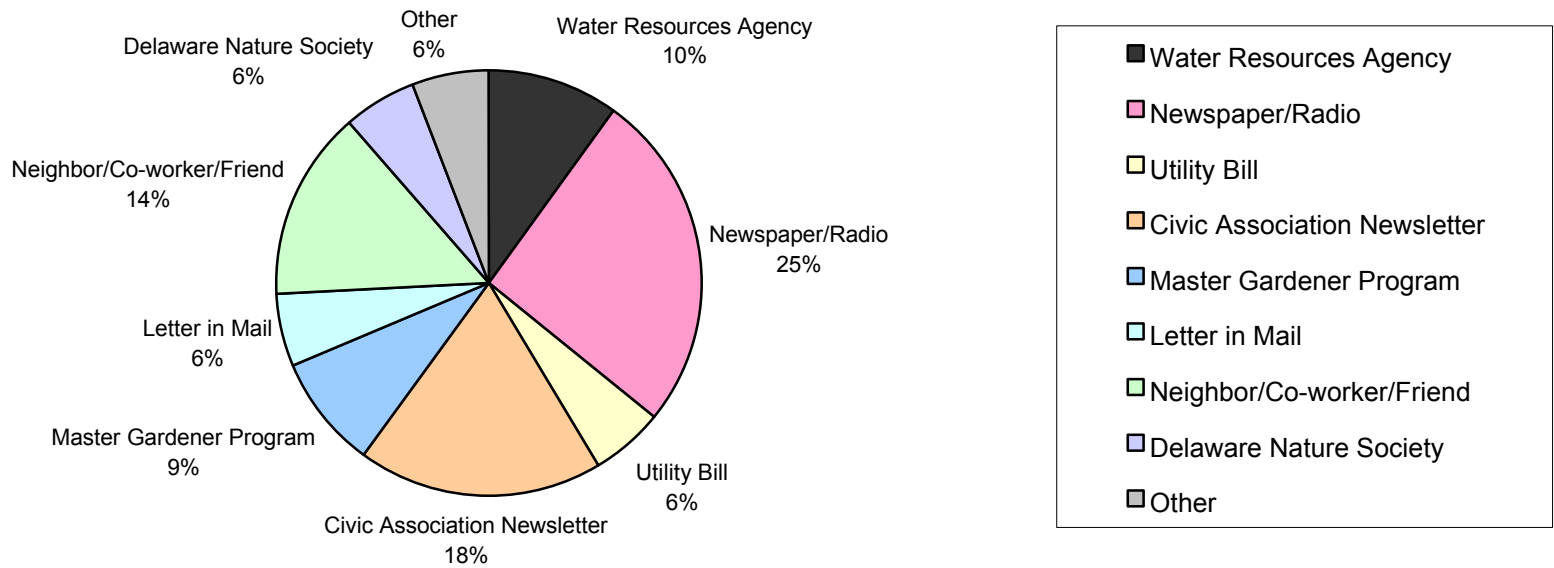
## **Conclusions**

Several conclusions can be made from the results of the Christina Basin rain barrel surveys. First of all, with 100% of those surveyed being pleased with their rain barrels, it can be concluded that the program has started as a success. The best methods of recruiting individuals for the program seem to be newspaper/radio advertisements, civic association newsletters and by word of mouth. The majority of those participating had no prior knowledge or experience with using a rain barrel.

The set-up of the rain barrel provided only a few problems with sealing and valves for some while the majority of individuals had no problems. The most popular method of set-up was to place the rain barrel directly under the downspout. In terms of the estimation of gallons of water collected from using the rain barrels, most people accumulated between 100 – 199 gallons while a few collected as much as 600 gallons. The most common use of rain water was to water plants, shrubs and trees while watering gardens was the next most popular.

The appearance of the rain barrel was not an issue of complaint by an overwhelming majority of people but if a color change was available, green was the choice. Most people found the posting of the "Christina Basin Rain Barrel Program Participant" sign to be helpful. Almost everyone surveyed learned something from the process of owning a rain barrel with the most common comments being surprise at how much water could be collected, a feeling that they can help to reduce water usage during drought conditions and a desire to obtain other rain barrels.

**Figure 1: Where did you learn of the Christina Basin Rain Barrel Program?**



**Figure 2 : Have you ever collected rainwater before?**

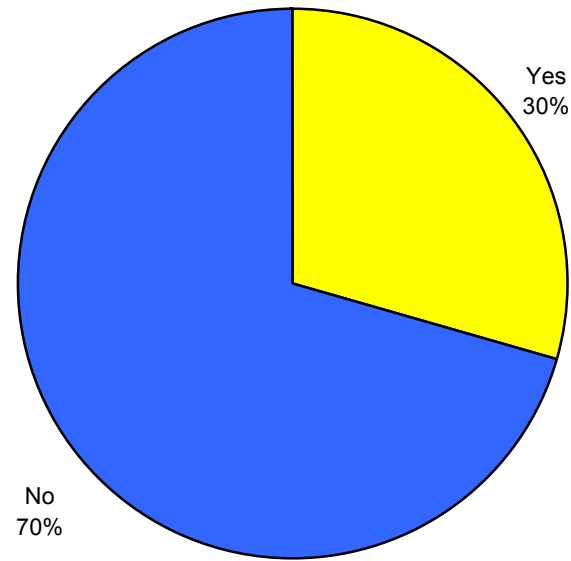
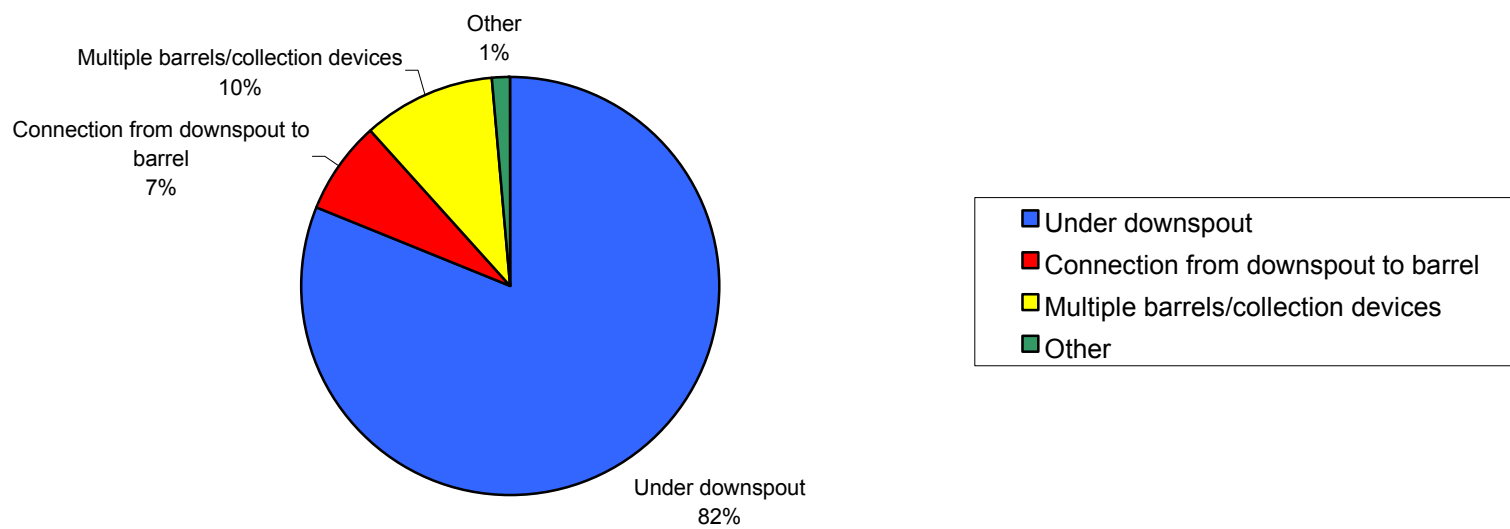


Figure 3 : How is your rainbarrel connected?



**Figure 4 : Did you have any problems with the construction of your waterbarrel?**

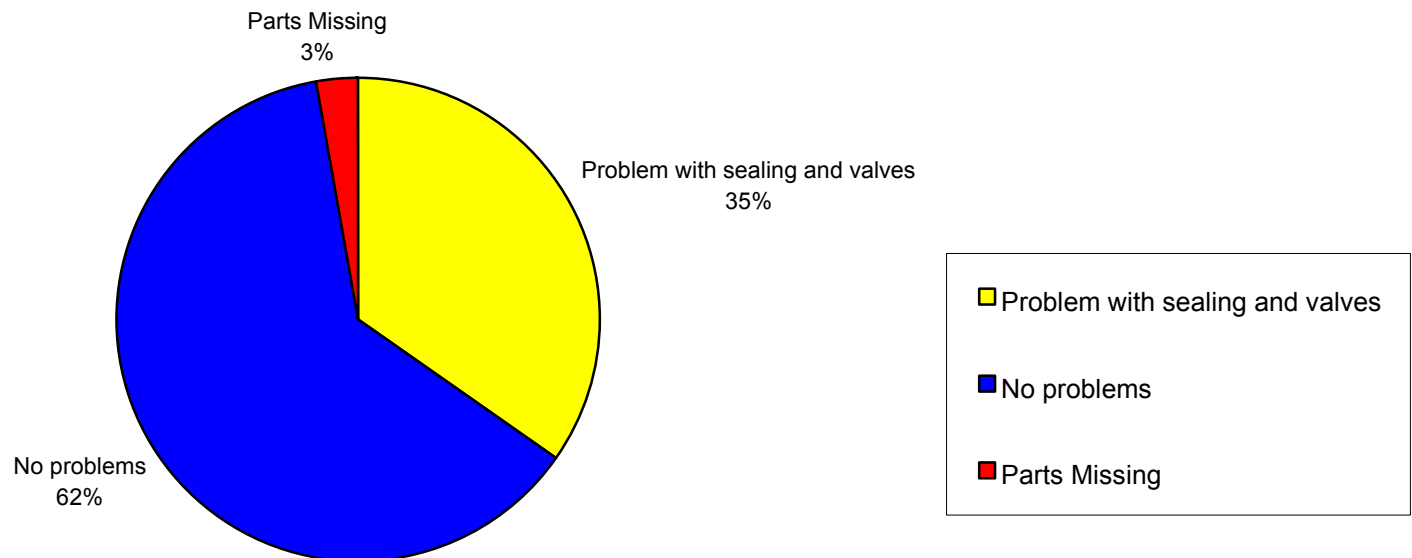
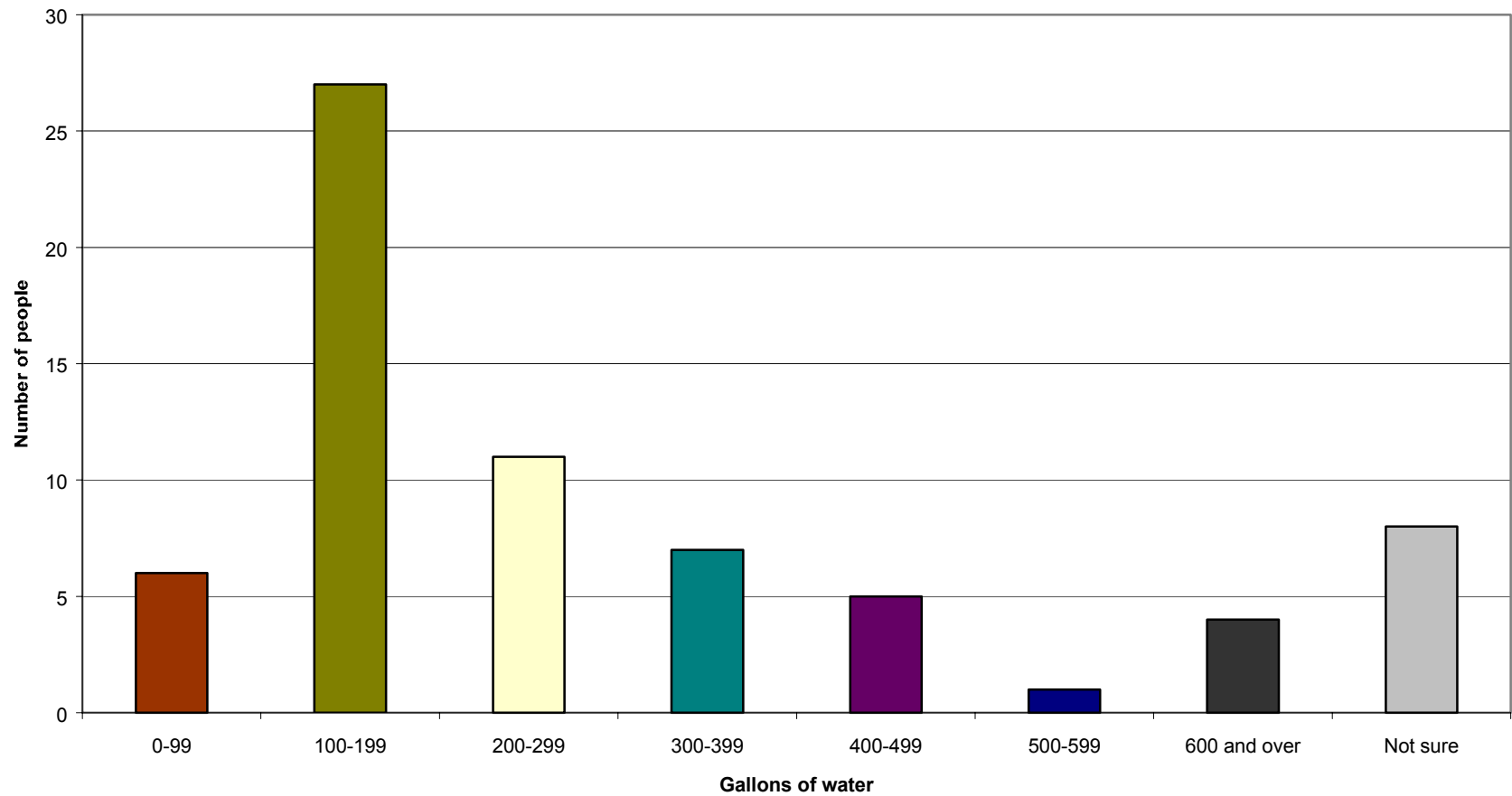


Figure 5 : How many gallons of water have you collected since receiving your rainbarrel?





**Figure 6 : What have you used your saved water to do?**

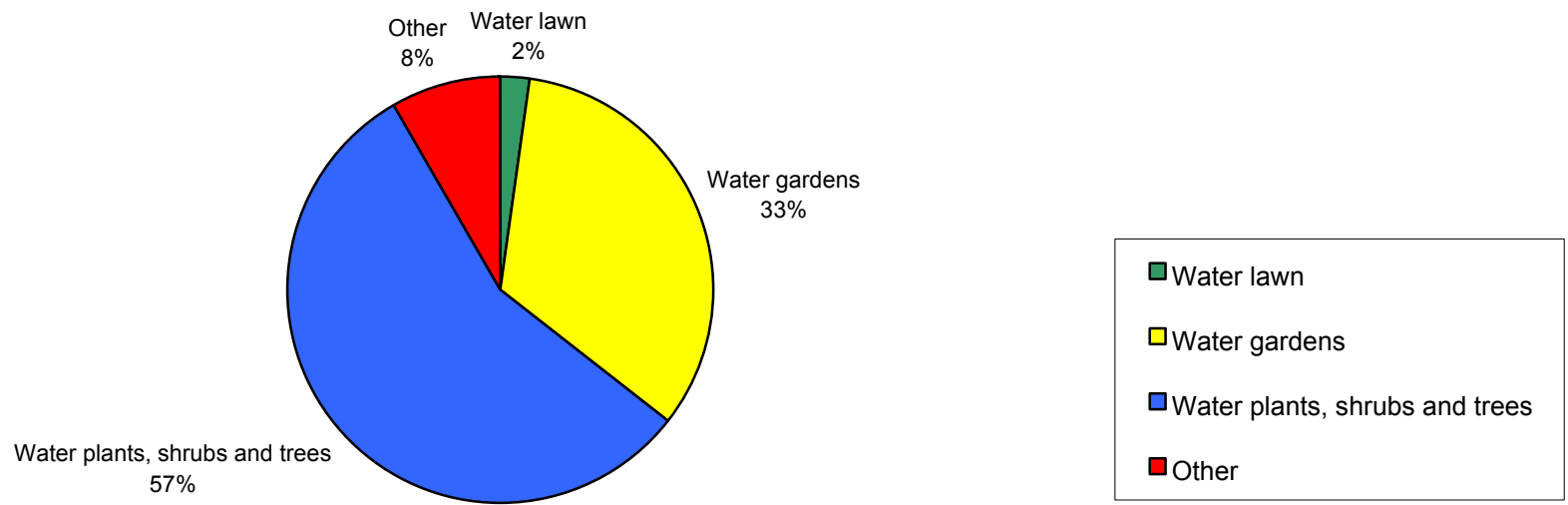


Figure 7 : Do you mind the appearance of your rain barrel?

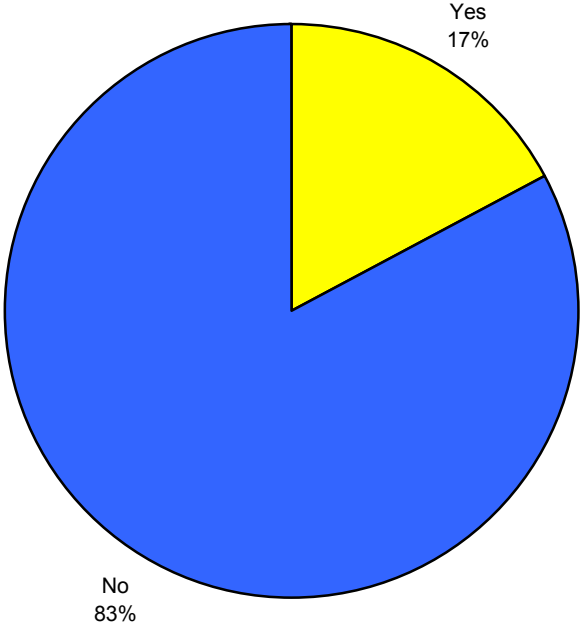
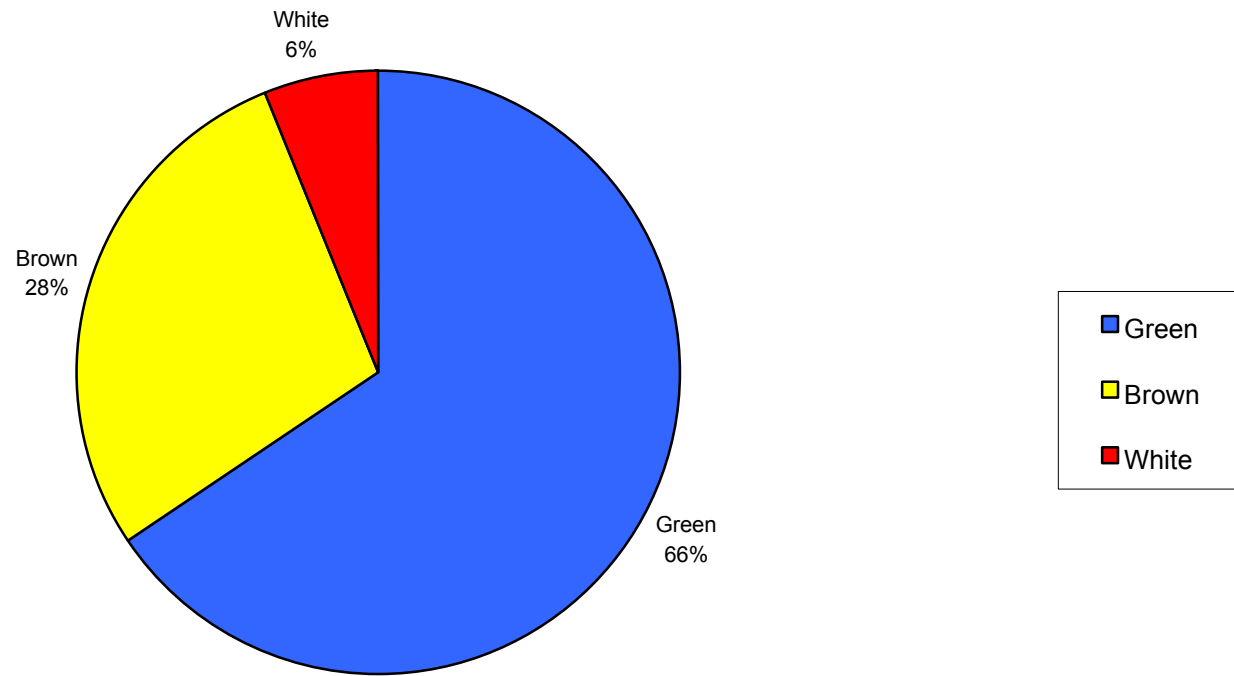


Figure 8 : What color rain barrel would you prefer?



**Figure 9 : Was posting the "Participant in Christina Basin Rain Barrel Program" sign helpful?**

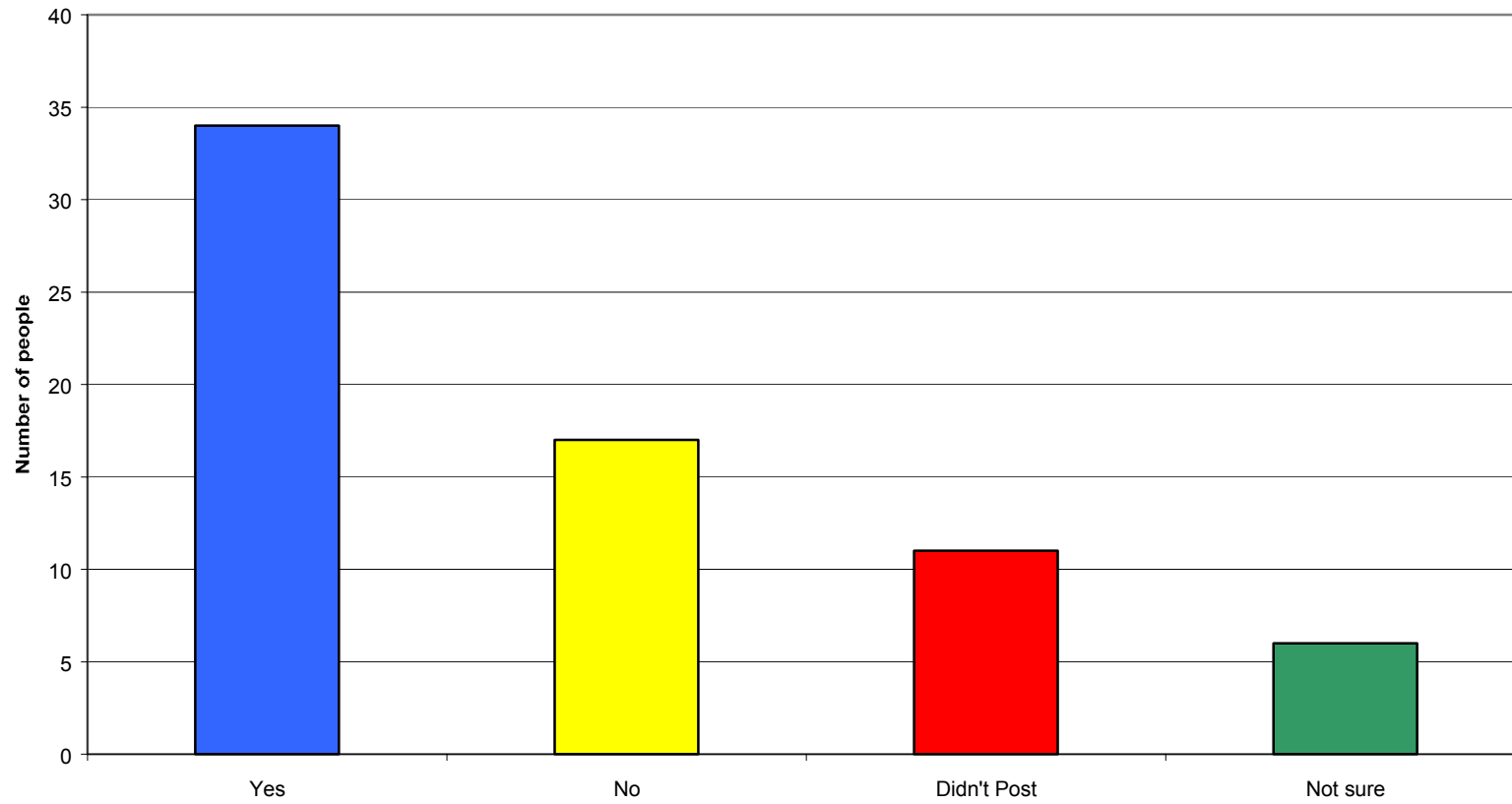


Figure 10 : Overall, are you pleased with your rain barrel?

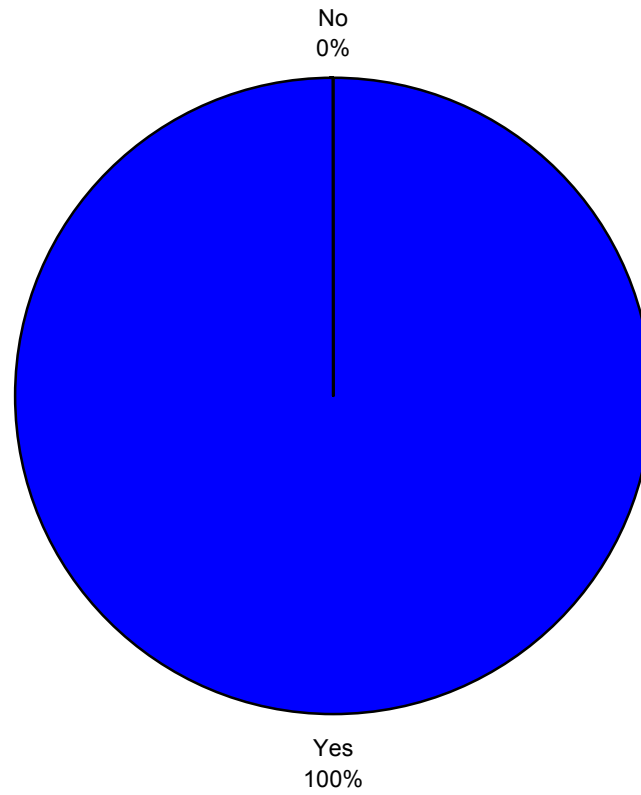


Figure 11 : What have you learned from this experience?

