



**Rainwater Harvest for Wildlife**  
**Texas AgriLife Extension Service**  
**McCulloch County**  
**Cooperator: Guy Phillips**  
**Vance Christie**

**Summary**

Surface and groundwater is becoming more and more of a limited resource across McCulloch County and the State of Texas. Rainwater harvest for livestock and wildlife is receiving more and more interest. In 2009 a result demonstration was established in an area with limited surface water and no groundwater sources on the Phillips Ranch east of Lohn in McCulloch County. The purpose was to provide a water source for wildlife by capturing rainwater and providing it through ground level guzzlers. A game camera was positioned to capture images of wildlife utilizing the site.

**Objective**

The initial rainfall harvest system was established as a method of providing supplemental water to wildlife. Specifically the landowner was interested in improving habitat for quail and holding more wildlife in this area of the ranch that only has one surface tank to water livestock and wildlife resources. 7 out of the last 10 years the ranch has received less than average annual rainfall as has been the case in most of McCulloch County. This trend has increased interest by landowners to find additional sources of water for livestock and wildlife. The demonstration has been used at the McCulloch County Range and Wildlife Tour in 2009 and was featured again in 2012.

**Materials and Methods**

60 feet of gutter was hung on an existing equipment shed that measures 30 X 70 feet for a total of 210 sq. ft. of surface area to capture rainwater in the pasture on an area of the ranch with only limited surface water resources. It is estimated that a 1" rain will yield 1000 gallons of water in this system. A 1300 gallon metal collection tank was utilized to hold the water captured from the shed. The metal tank is not recommended, however the cooperator had it on hand, and it has served its purpose well. However if utilizing metal, the emitters must be checked and cleaned regularly as rust and other deposits will clog the delivery system. ¾" PVC pipe was installed from the collection tank to two sites that would provide water for wildlife. Two plow disk basins were connected to provide water to the wildlife with guzzler type emitters. A game camera was installed 10 feet from one of the emitters during a 2 week period in 2010, and again 8 feet from the other from August 14 until September 19 of 2012 to document use of the water provided.

**Results and Discussion**

During the Spring and Summer of 2010 with frequent rainfall, the tank remained full and the watering system worked well as long as emitters were cleaned regularly. Documentation during the two week period beginning October 8 and running through October 22 of 2010, indicated that the following wildlife species were observed via the game camera utilizing the water provided at the site. During the Winter, Summer and Fall of 2011, infrequent rainfall caused the system to become erratic in its ability to consistently provide water to the emitters and no data was collected during this time. Again in 2012 the tank remained full through the summer and the camera was set up to capture images in August and September.

	Whitetail Doe	Whitetail Buck	Raccoon	Skunk	Grey Fox	Eurasian Dove	Mourning Dove	Undetermined
2012	51	2	31	2	15	5	4	5
2010	15		8	5	2			6

Date and time stamp was utilized to determine duplicates of animals captured in photos utilizing the site for extended periods of time. Although images were not captured of continuous daily use, repeat use throughout the period by the same animals seems plausible. With at least one doe and fawn utilizing the site daily and probable identification of 3 raccoons and a pair of grey fox using the site frequently.

In addition there was a couple of images of a red-tailed hawk and cardinals utilizing the site.



## **Conclusions**

Providing water to wildlife through rainwater harvest is a viable option, especially in areas with no groundwater sources and limited surface capture opportunities. A variety of species will utilize and benefit from providing this supplemental water. It is recommended that poly or other forms of plastic capture tanks be utilized to prevent the need to frequently clean the emitters on the supply end of the system. Proper placement of the game camera is imperative to collecting viable data on usage of the system. Wind and movement of brush allowed for lots of erroneous photos being taken, and the distance made the capture of bird images difficult and we were unable to determine species or type, much less if they were even present in the photo.

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