



## Rainwater Capture Greenhouse

**R**esearchers at the University of South Florida have developed a built-in method for capturing rainwater in greenhouses.

It has been observed that the gaps between water supplies and demands have been increasing in recent times. Environmental and natural events impact water supplies. For instance, the replacement of Florida natural wetlands with concrete and subdivisions has altered rainfall patterns contributing to the drought and water restrictions that have been seasonally imposed. Although hurricanes bring rain storms, the natural water supply is largely wasted because constructed surfaces are designed to run-off the rainwater.

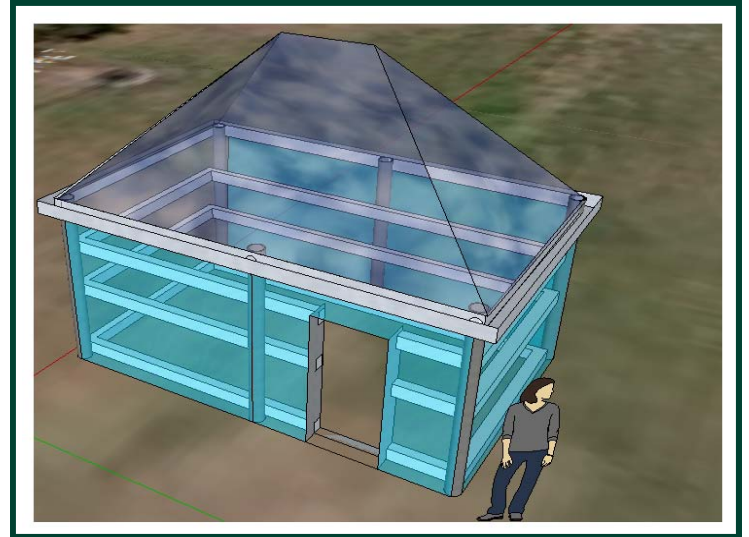
The typical Tampa household consisting of a 1/4 acre lot receives 4.4 feet of annual rain; experts concluded that the stormwater runoff could be as much as 275,190 gallons/year. This is an equivalence of 754 gallons/day or enough water for a family of six people to live in Tampa where typical consumption is 110 gallons/day.

USF scientists designed and constructed a greenhouse with a roof that captures water which then is collected in the pipe structure of the greenhouse itself. This retained rainwater from within the pipe structure can later be used for irrigation and other purposes.

### Advantages:

- Conserves water for irrigation and other domestic needs.
- Helps to minimize flood risks and other potential environmental damages from run-offs.
- Minimizes the pressure to impose water restrictions during drought because there is less water demands on the county.

### Water Supply for Irrigation and Other Purposes



Tech ID #09B095

