

Tennessee Pollution Prevention Partnership Success Story

CAC Knoxville - Knox County
Community Action Committee
Helping People. Changing Lives.

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Rainwater Catchment Saves Thousands of Gallons

The Member

The Knoxville-Knox County Community Action Committee (CAC) is a local public agency serving the community with a comprehensive range of federal, state, and locally funded programs. It is a part of the nation's premier network in building communities, servicing families, and advocating opportunities for low-income people. CAC promotes family self-sufficiency and independent living for low-income and other vulnerable people through caring and efficient delivery of needed services and the development of partnerships at all levels. CAC has been "Helping People, Changing Lives." since 1964, when it was created by Knox County and the City of Knoxville. CAC is locally governed by a diverse group of citizens who represent the people served by CAC, low-income neighborhoods, government, and the community at large.

The Story

The Beardsley Community Farm, a program of CAC, is a 7-acre urban demonstration farm and community garden. In order to reduce water utility bills for the farm and to conserve water, Beardsley Community Farm volunteer Frank Callo designed a rainwater catchment system to support crop irrigation.



With the help of many farm staff and community volunteers, the system was up and running by late October 2008. The system funnels rainwater from the roof of a storage building into rain barrels which the farm calls cubetainers. The water is then jet pumped into four large storage tanks, each with a potential capacity of 1,550 gallons. The rain water is thus saved and can be used for spring and summer crop irrigation throughout the farm. Each gallon captured and stored by the system is used on the farm to grow vegetables which are donated to local food

pantries. Funds saved over the course of one growing season paid for the water catchment system: gutters, storage tanks, fittings, pump and hoses.

The Success

The rainwater catchment system successfully conserves 10,000 gallons of water each year. Before the system was running, the farm's average monthly water bill was \$127. Now, with use of the rainwater catchment system, the farm's average monthly water bill is \$7 – the nominal fee for maintaining water hook-up and maintenance. The system also serves as an educational model for the community on the ability to easily conserve water through rainwater harvesting. As the farm grows in size, the need for this water catchment system increases, and maintaining it has become an integral part of the farms functioning.



The Pollution Prevented

At full capacity, the farm's eight cubetainers can hold 300 gallons of water (2,400 gallons total). In addition, there are four large water storage tanks which store 1,550 gallons (6,200 gallons total). These gallons captured and stored by the system are saving the farm over \$1,000 each growing season. In addition, each gallon the system captures is relieving the Third Creek Watershed, a highly urbanized watershed of Knox County, of that water influx into the storm drains.

October 2010