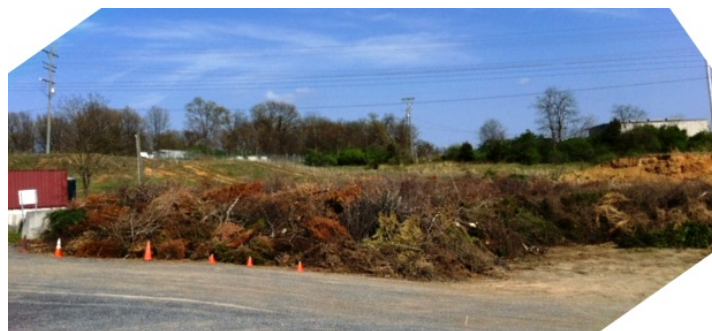


## Rural/Small Town Organics Management Case Study Mulch and Compost Programs in Berkeley County, West Virginia

### **Background**

Berkeley County, West Virginia (population 105,750) is located in the Eastern Panhandle region of West Virginia. Martinsburg (population 17,227) is the county seat. Hedgesville (population 318) is the only other incorporated town in the County. There are numerous unincorporated communities.



The [Berkeley County Recycling Program](#) is a comprehensive voluntary drop-off recycling program operated by the Berkeley County Solid Waste Authority (Berkeley County SWA). The drop-off program serves the unincorporated areas in Berkeley County of Inwood, Marlowe, Falling Waters, Tomahawk, Little Georgetown, Jones Spring, Shanghai, Whittings Neck, Arden, Knollville, Bunker Hill, Darkesville, Bedington, and Scrabble, along with the Incorporated Town of Hedgesville and the City of Martinsburg.

Two recycling drop-off centers accept yard waste: Inwood (population 2,954) and Martinsburg.

The Berkeley County Recycling Program is managed by an all-volunteer Board of Directors. Over the years, these volunteers have won many accolades, including a Chuck Chambers Public Service Award, a West Virginia Recycling Champion Award, an Association of West Virginia Solid Waste Authorities Volunteer of the Year Award, a West Virginia-Department of Environmental Protection Stewardship Award, a Potomac River Champion Award, and a Presidential Lifetime Volunteer Service Award.

### **Planning and Program Description**

The Berkeley County Organics Recycling Program accepts brush, Christmas trees, leaves, grass clippings, and garden waste. Residents are asked to drop-off brush at a designated area at the Recycling Center. Typically, the brush is ground bi-annually into mulch by County staff. The ground mulch is left onsite and sold to the public at \$12 per bucket load.

The collected leaves, grass, and garden waste is held onsite until enough material is gathered to fill a 40-cubic yard collection dumpster. The material is then loaded into the collection dumpster by Recycling Center staff. The collected organics are then transported to the Lyle C. Tabb Composting Facility, a farm-based compost operation located in nearby Jefferson County, West Virginia.

In addition, the County's residential waste hauler provides a fee-based curbside collection of organics that is also delivered to the two recycling drop-off centers that accept organics.

The Berkeley County SWA also offers a free seasonal collection for deer carcasses. The program was started in an effort to reduce open dumping by providing a more environmentally sustainable alternative for the hunters. The deer carcasses are mixed with compost at the Recycling Center in a 20-cubic yard roll-off container to reduce odors. When full, the container is hauled for composting at the Lyle C. Tabb Composting Facility.

The Berkeley County SWA also hosts an annual truckload sale of backyard compost bins in an effort to encourage backyard composting. Over the years, more than 1,000 compost bins have been sold to County residents.

### ***Cost/Funding***

The cost to grind brush into mulch at the two organics recycling drop-off sites amounts to \$45,000 - \$65,000 per year. These costs are a significant part of the \$240,000 annual budget for the Solid Waste Authority's recycling program.

The costs are offset by selling the mulch for \$12 per bucket. In addition, residents are charged a "cost sharing" processing fee of \$5 per load to drop-off brush. In 2011, the fee and mulch sales generated \$31,000 for the overall recycling program. The remaining costs were absorbed by the Authority's operating budget for its recycling program and/or offset by state grants.

The Lyle C. Tabb Composting Facility accepts the program's mixed leaves, weeds, grass clippings, and garden debris without charge. Typically, the transportation costs to the composting facility are around \$6,200 per year. These costs are funded as part of the recycling program operating budget.

### ***Outreach and Education***

The Berkeley County SWA has an aggressive outreach program to promote the County's overall recycling program, including the organic collection. The County website, electronic newsletters, roadside banners, radio ads, road signage, Facebook, public speaking, newspaper advertisements, community forums, church groups, and more are all used to promote organics diversion.

### ***Acceptable Materials and Program Participants***

Residential yard trimmings, including brush, Christmas trees, leaves, grass clippings, and garden debris is accepted in the program. A special deer carcass collection program was also initiated. The program is open to all County residents.

### ***Equipment and Collection***

Brush is piled at the two organics recycling drop-off centers. About every six months, the material is put through a grinder. The tub grinder is owned and operated by a private vendor; the vendor is selected by a competitive bidding process.

The Berkeley County SWA owns and operates a John Deere skid loader to load the mulch. The unit is also used for recycling center maintenance activities and miscellaneous compaction uses. The skid loader was purchased with a West Virginia Recycling Assistance Grant.



Other yard trimmings, including grass clippings and leaves, are placed in 40-cubic yard roll-off containers for transport to the Lyle C. Tabb Composting Facility. The deer carcasses are collected in 20-cubic yard roll-off containers for transport to the composting facility. The Berkeley County SWA owns the open top roll-off containers. They were purchased with a West Virginia Recycling Assistance Grant. West Virginia certified private haulers are hired to haul the yard debris to the Lyle C. Tabb Composting Facility.



### **Results and Impacts**

In 2011, the organics recycling program collected and recycled 1,880 tons of brush. In addition, the program collected 348 tons of leaves, grass clippings, and garden debris. Also, there was 6,000 pounds of deer carcasses collected.

Recycling tonnages are expected to be significantly higher in 2012 due in part to the June 29, 2012 extreme storms that impacted the region (a derecho). This unusual windstorm generated tremendous volumes of brush which was delivered to the County's organic recycling program. The County was declared a national disaster area, eligible for FEMA funds. FEMA estimated \$45,000 of recycling program expenses were associated with this event.

In 2011, the recycling program had 99,483 participants. A "participant" is defined as one vehicle; which is measured by an electronic vehicle counter. There is no data specifically for participants bringing in organic material alone. In addition, there were 374 subscribers to the yard waste curbside program, generating 4,596 bags for pickup.

### **Lesson Learned**

In time, yard waste, particularly grass, corrodes steel. The Authority has found it best to place thick amounts of paint on the inside of the roll-off containers to reduce corrosion.

### **Conclusion**

The Berkeley County Recycling Program presents a viable model for rural and semi-rural areas to collect and process organic materials. Through the Solid Waste Authority, organics, including brush, yard trimmings, leaves, and deer carcasses are collected at two of its drop-off recycling centers. The County receives significant volumes of brush which is ground into mulch onsite and sold to County residents to offset program costs.

The program works with a regional farm-based composting operation to accept collected yard trimmings, leaves, and deer carcasses for composting. This operation is quite successful and accepts the organics at no cost to the Authority. In this way, the Authority is able to offer a comprehensive collection program to its residents without expending the necessary capital, equipment, and labor to process the material itself.



Appreciation goes to Clint R. Hogbin, Chairman, Berkeley County Solid Waste Authority for his contribution to the writing of this case study.

For more information, contact Berkeley County Solid Waste Authority at 304-267-9370 or [crhogbin@gmail.com](mailto:crhogbin@gmail.com) or visit the County's website at <http://www.berkeleycountycomm.org/links/recycle.cfm>.

The Northeast Recycling Council (NERC) is a non-profit organization that conducts research, hands-on projects, training, and outreach on issues associated with source reduction, recycling, composting, environmentally preferable purchasing, and decreasing the toxicity of the solid waste stream.

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