

# APPALACHIAN REGIONAL RECYCLING CONSORTIUM

*Radford, Virginia*

The Appalachian Regional Recycling Consortium (ARRC) is a cooperative recycling service created through an inter-agency agreement among the Lenowisco, Cumberland Plateau, Mount Rogers, New River Valley, Fifth, Central Shenandoah, and West Piedmont Planning District Commissions (PDCs). Initially funded by the Appalachian Regional Commission (ARC), the ARRC was established to serve the 21 counties and five cities in the ARC region of Virginia. Since that time the actual service area has been expanded to include the counties of: Allegheny, Bath, Bland, Botetourt, Buchanan, Carroll, Craig, Dickenson, Floyd, Franklin, Giles, Grayson, Highland, Lee, Montgomery, Patrick, Pulaski, Russell, Scott, Smyth, Tazewell, Washington, Wise, and Wythe. The cities served by the program are Covington, Clifton Forge, Radford, Galax, Bristol, and Norton.

The ARRC's primary goal is to assist these rural local governments in addressing the unique challenges they face as they work to reduce their waste stream and comply with Virginia and Federal recycling mandates in an effective and efficient manner. Low population density, increased distance to "markets," the low or negative value of many recovered materials, and the lack of positive experiences with regionalization are the primary challenges.

ARRC's comprehensive services to local government, industries, recycling coordinators, and entrepreneurs include: regional recycling services; industrial technical assistance; recycled product development / business assistance; workshops and seminars; educational information; recycling equipment information; market information; recycled product sourcing; and regulatory and legislative updates. Specific programs used to deliver these services include the:

- Recycling Business Assistance Program (RBAP);
- Recycling Industrial Technical Assistance Program (RITA);
- Regional Equipment Sharing Program /

- Mobile Tire Shredding Program; and
- Southwest Virginia Waste Exchange.

These programs interrelate and reflect ARRC's overarching strategy to use an integrated systems approach to combine the vital issues of environmental sustainability, economic development, and the need for mutually beneficial in-region market development to increase recovered materials utilization. ARRC's general services, which benefit the 520,000 residents of the Appalachian region of Virginia, are funded with approximately \$150,000 annually. Of this, \$60,000 is applied to general operating expenses and \$90,000 to the expenses of a one year of Phase I Tire Shredding Project.

## **In-region market development**

Federal and state recycling mandates and the concern for preserving natural resources, by maximizing the usable life of products made from them, have resulted in an increasing supply of recovered materials ready to be processed or remanufactured into new products. Even though much of the technology needed already exists, in rural areas the lower volumes of recovered materials, combined with the distance to "traditional" recycling markets and the low or negative dollar value for materials in those markets, make comprehensive recycling programs difficult to justify. This phenomenon has created both the need and an excellent opportunity for new "in-region" business development. ARRC's Recycling Business Assistance Program and Recycling Industrial Assistance Program are designed to meet these challenges. The programs are supported by \$63,000 in funding provided by the Environmental Protection Agency Region III, the Appalachian Regional Commission, the Virginia Water Project, and \$29,000 in matching funds from other sources.

## **Recycling Business Assistance Program (RBAP)**

The ARRC Recycling Business Assistance Program was established to:

- promote, create, and expand markets for the beneficial utilization of recovered materials;
- support the development of innovative recycling technologies;
- stimulate economic development; and
- create employment opportunities.

Services to entrepreneurs include product feasibility studies, market surveys, recovered material sourcing, incentive and grant information, business plan development assistance, finance package assistance, site location assistance, regulatory

information, equipment availability, new and used, leasing information, local government contacts, and state agency contacts. RBAP also provides support to entrepreneurs challenged by considerations unique to innovative, "non-traditional" businesses working with recycling technologies. Financial institutions, for example, are frequently reluctant to become involved with a business that handles "solid waste" due to perceived liability issues.

To date the RBAP program, conducted by ARRC staff, has assisted over 45 entrepreneurial clients since the program's inception in October 1994. The program currently has 14 active clients.

## **Recycling Industrial Technical Assistance (RITA)**

The purpose of the RITA Program is to promote the utilization of locally recovered materials by local industries and to provide integrated solid waste management assistance. The program's industrial technical assistance services include: waste audits, pollution prevention information, and technical assistance for process modification, and material sourcing.

The basic strategy of RITA is to provide the information and assistance necessary for industries to successfully reduce the volume or toxicity of the waste they produce and / or to include recovered materials as a substitute for part of their manufacturing feedstock. In addition to being environmentally responsible, products with recovered material content are a requirement for many federal and state contracts. Incorporation of recycled materials in manufactured products can help make industries more competitive, both locally and internationally. An increase in sales, due to the competitive edge offered by manufacturing recycled content products, can lead to job retention and expansion for the region.

Through RITA, over 12 industries have requested services ranging from waste audits to market referrals since the program's inception in October 1994.

## **Regional equipment sharing/ tire shredding**

Perhaps the great success of ARRC grew out of its very first initiative. When local participating governments were surveyed shortly after ARRC's inception, it was determined that scrap tires were the material with which most localities needed assistance. The shredding of scrap tires facilitates their handling and reuse as a recycled material. Providing a regional tire shredding service for southwestern Virginia became the

initial major focus of the ARRC.

A support grant for initial development of the Mobile Tire Shredding Project was provided by the Center on Rural Development (CORD) in 1993. This grant and the technical assistance provided by CORD, made it possible to bring this program to the implementation stage. The program circulates tire shredding equipment to each participating locality on a regular schedule, shreds the tires on-site, assists the localities by providing information on local beneficial utilization projects, and works on market development.

In January 1994, the ARRC finalized a Cooperative Agreement with the Virginia Department of Environmental Quality, Waste Division (DEQ). As a "current flow" demonstration project, the financing to implement the Regional Mobile Tire Shredding Program is provided from the Waste Tire Fund. The Regional Tire Shredding Project was originally planned to be implemented in three phases. Funding was received in January 1994 from the DEQ for Phase I (total funding for Phase I is \$465,000, 1993 to 1996) and the Mobile Tire Shredding Project began shredding tires in April 1994. Phase I equipment currently shreds approximately 25,000 tires each month and is serving 16 localities at fourteen locations throughout southwestern Virginia. Phase II of the program, slated to begin in early 1996 with DEQ-committed funding of \$650,000, will serve an additional twelve localities. Phase III of the program is not expected to be implemented at this time. Phase I and Phase II equipment combined is expected to shred approximately 750,000 tires each year.

At this time the program has shredded 300,000 tires in the region of which about 50 percent has been used in local projects. Civil engineering strategies such as erosion control berms, sub-grade fill for roadways, and alternative daily cover have utilized this commodity. Phase II shredding equipment will yield a product that has a current "market" value as high as \$30 per ton, whereas Phase I equipment yields a product that does not have a current market value.

### Southwestern Virginia Waste Exchange (WEX)

In the conservation hierarchy of integrated solid waste management, source reduction (reducing the volume or toxicity of waste generated) and reuse are considered "higher priorities" than recycling. A waste exchange system that incorporates the three strategies is one way to expand materials

## How To Get in Touch with Appalachian Regional Recycling Coalition

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**Scope:** City/county/region

**Inception Date:** 1992

**Participants:** Local governments, industry, entrepreneurs, local recycling coordinators

**Project type:** Integrated waste management, recycling/reuse, economic development, public education

**Methods used:** Demonstrations, regional processing services, seminars, workshops, on-site technical assistance

**Lessons learned:** The overall program benefitted by starting up with a service that communities clearly wanted; a regional scale helps rural places gain critical mass.

reuse opportunities. Large, multi-state waste exchanges that facilitate the efficient transfer of large volume, continuous supply, or "high value" commercial / industrial by-products and "waste" materials exist across the country.

To meet the need of local businesses, individuals and recycling coordinators, ARRC is establishing Southwestern Virginia Waste Exchange to provide a mechanism for the effective exchange of smaller quantities of one-time or "lower value" materials on a local scale. Through a \$12,000 grant from the Virginia Department of Environmental Quality, the ARRC is establishing a locally-focused, transferable electronic waste exchange database. There is no limit to the number of items that may be listed, nor is there a fee to do so. Custom searches and "match searches," between materials available and materials wanted, can be conducted. A newsletter--to augment the database--that lists materials available and wanted, premiered July 1995.

Challenges encountered in delivering ARRC's programs include: the diverse needs

requiring multiple response options; the changing regulatory climate; dwindling funding sources; and the habituated reluctance of state governments and local inspectors to support alternative beneficial utilization of materials.

The Appalachian Regional Recycling Consortium is positioned to continue assisting Southwestern Virginia by working to combine the environmental realities of waste reduction, pollution prevention, resource conservation and recycling with the economic realities of jobs creation, retention and expansion through sustainable partnerships.

—Community Sustainability Resource Institute



## UPDATE

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The activities of the Appalachian Regional Recycling Consortium have changed significantly. The Regional Equipment Sharing Program has been reduced to four counties and one city, and tire shredding activity has been reduced to about 7,000 tires per month, in two locations. The program reductions were due to changes in state government priorities, which did not include support for this type of recycling.

At the same time, the Consortium's technical assistance and outreach programs have expanded to five states: Virginia, Maryland, North Carolina, South Carolina, and Georgia. The Consortium conducts workshops on recycling programs and technology, emphasizing the use of mobile plastic shredding and bailing equipment to facilitate the recycling of plastic materials. The workshops also discuss cooperative marketing approaches for recycled materials. Participants include representatives from business and industry as well as local, regional, and national government. A \$25,000 annual grant from the Southeast Rural Community Assistance Program supports the program.

The Recycling Industrial Technical Assistance Program (RITA) continues with about five industrial waste audits for private firms per year. The Consortium also continues to maintain the computer-based Southwest Virginia Waste Exchange clearinghouse. For the future, it is hoped that further changes in state government may bring regional recycling back into the picture.

—Community Sustainability Resource Institute