

Recycling In Oklahoma
A Report to the Oklahoma Legislature

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Purpose

The Oklahoma Legislature, through the Oklahoma Solid Waste Management Act (“Act”) 27A O.S. § 2-10-205(A) has set a goal of recycling at least ten per cent of the solid waste generated in the state. The Act encourages the state to achieve that goal by December 31, 2011. 27A O.S. § 2-10-205(C). DEQ is charged with coordinating the effort along with the Oklahoma Recycling Association and other interested parties. The statute requires that this report be prepared and issued to the Legislature by December 31, 2011.

Background

The Act has long recognized that “The recycling and reuse of recoverable materials will create new employment, provide and allow for expansion of existing manufacturing, thereby increasing employment and payrolls as well as upgrading the state’s natural resources.” 27A O.S. § 2-10-205(A). Recognizing the critical role of Oklahoma manufacturers who need recyclables to make their new products the Act sets a goal for every incorporated municipality with a population greater than 5,000 to develop a recycling program. 27A O.S. § 2-10-205(B).

The statute levies a fee on each ton of solid waste disposed in landfills. 27A O.S. § 2-10-802. To the extent that funds are available, the Act allows DEQ to financially help government entities invest in recycling equipment. 27A O.S. § 2-10-802(C)(4). DEQ can reimburse local governments for twenty-five per cent of the costs of recycling equipment, with a \$20,000 ceiling on each transaction. DEQ is not allowed to allocate more than \$200,000 per fiscal year for this program.

The Used Tire Recycling Act, 27A O.S. § 2-11-401 *et seq.*, creates a comprehensive statewide program to recycle used tires. This statute was most recently amended in the last session of the Legislature. Information on this program is available at www.deq.state.ok.us/lpdnew/TireRecyclingPrg.htm.

The Oklahoma Computer Equipment Recovery Act, 27A O.S. § 2-11-601 *et seq.*, establishes a “convenient and environmentally sound recovery program” for computers and computer monitors. The design of this program is based on manufacturer recycling programs, with shared responsibilities among consumers, retailers and government. This statute is similar to provisions enacted by twenty-five other states. Information on this program is available at www.deq.state.ok.us/lpdnew/ewasteindex.html.

Oklahoma's Current Recycling System

Manufacturers

Companies that use recycled materials to manufacture their products are the keystones of the recycling system. Their demand drives the entire process.

In Oklahoma recycling is big business and has much potential to become bigger. The state is incredibly fortunate to be home to a number of major manufacturers who need recyclables as their raw materials. Many of these operations are so large that they must buy recyclables recovered throughout the United States. Therefore, lower transportation costs should make Oklahoma produced recyclables their cheapest sources of raw materials.

Many of these companies are central to their local economies. The Oklahoma State University Cooperative Extension Service has documented that many of these plants are the largest employers of their communities (Eilrich, 2002).

The manufacturers who require recycled products and are known to DEQ are available at www.deq.state.ok.us/lpdnew/recyclers/reusers.htm. Several of these companies, particularly those making construction materials, have been severely challenged in the current recession. For all, obtaining more of the cheaper Oklahoma produced recyclables will be critical to their continued viability in the state.

New opportunities may be developing in the asphalt industry. Many are advocating the use of recycled asphalt shingles in mix designs.

Other states have also enjoyed cost effective successes using ground crumb rubber produced from used tires to make rubberized asphalt. There are two crumb rubber producers in Oklahoma.

Commercial Recyclers

The metropolitan areas have a number of commercial recycling companies. Typically, these firms collect, process, and market recyclable commodities. Most produce multiple grades of paper, metals, plastics, and glass. The Tulsa region also includes firms that are recycling construction and demolition wastes.

Smaller towns are typically served by automobile salvage companies who collect and process scrap metal. Processors for other recyclables are beginning to locate in smaller communities. For example, an entrepreneur in Tahlequah offers curb-side recycling collection based on customer subscriptions. All of the recycling companies known to DEQ are listed at www.deq.state.ok.us/lpdnew/Recyclingindex.htm.

A number of entrepreneurs are beginning to collect used roofing materials in anticipation of the development of a market in the asphalt industry for asphalt shingles. Several companies are also processing electronic waste for recycling. Recently, several companies have begun to collect and process expanded polystyrene packaging (Styrofoam).

DEQ is not aware of any commercial composting companies in the state who are recovering feedstock from municipal solid waste.

Energy Producers

Tulsa is served by a company that incinerates municipal solid waste. The heat from combustion is used to generate steam. The steam is either sold directly to an adjacent refinery, or used to generate electricity.

Extremely high capital costs make it unlikely that any other energy recovery facilities will be developed in the state. Such costs for refurbishing an incinerator similar to the one in Tulsa have been largely responsible for the bankruptcy of Harrisburg, Pennsylvania.

Retail Recyclers

A growing number of retailers are beginning to collect recyclables from their customers as well as from their internal operations. For example, Target is collecting plastic bottles, and Home Depot and Lowes each accept compact fluorescent light bulbs for recycling. Some soft drink companies are beginning to deploy reverse vending machines at retail sites to collect their empty containers.

The battery industry has developed an extensive collection network to recycle spent rechargeable batteries. Virtually every store that sells rechargeable batteries or products that use them collect the spent batteries from customers. The industry is also planning but has not yet deployed a collection system for spent alkaline batteries.

Jobbers who serve the heating, ventilation, and air conditioning trade have access to an industry sponsored system for recycling mercury thermostats. There is a one-time cost to establish the collection service.

Local Governments

Local governments across the state are involved in recycling. Some operate drop-off recycling centers. Others provide residential collection of recyclables. Some communities also process their recyclables. All of the community programs known to DEQ are listed at www.deq.state.ok.us/lpdnew/recyclers/Community%20Recycling%20Information.htm.

A number of communities also compost wastewater treatment sludge. Some communities compost yard waste.

Citizens

Most community recycling programs were developed in response to customer demand. In Norman, for example, citizens voted a rate increase to pay for curbside recycling collection. In another example, Oklahomans have demonstrated their willingness to recycle by increasing computer recovery 212% in the second year of the computer recycling program (Adler-Mckibben, 2011).

There is widespread recognition that materials such as glass and plastic bottles are recyclable. However, there is virtually no understanding of the economic obstacles to successfully recycling those commodities.

Recommendations

Help for Oklahoma Manufacturers

Oklahoma generated recyclables are the cheapest raw materials for Oklahoma manufacturers who need them. However, there is very little communication from those manufacturers through the processors from whom they buy, to the businesses and citizens who separate the material from their waste. Everyone wants Oklahoma manufacturers to thrive. Each group in the recycling system needs better information to improve their performance. The DEQ should become the focal point for that conversation and disseminate information throughout the recycling system.

Control Shingle Collectors

A number of entrepreneurs have begun to collect roofing waste. They anticipate the development of a market for asphalt shingles in the asphalt industry. Virtually all are receiving all types of waste generated during a roof replacement project: shingles, wood, metal, paper. Few have an adequate program to separate the asphalt shingles and metal, and send the unusable waste to a proper landfill. None are checking for asbestos, and none have adequate storm water management. Their eyesores are growing. Further, if any of these companies go out of business, there is no mechanism to clean up the mess they leave behind. The Legislature should clarify that DEQ has the authority to regulate shingle collectors like solid waste disposal sites.

Recycle Toxic Materials

The computer industry helped to create the Oklahoma Computer Equipment Recovery Act because the companies involved understand that computers and monitors contain lead and other hazardous materials. Lead is a human poison. The Oklahoma statute does not include televisions in spite of the fact that they also contain lead. The Legislature should consider following the example of Texas by modifying the law to include televisions.

Old thermostats used in residential heat and air systems contain mercury. Mercury is a human poison. Mercury is no longer used in thermostats and is not a threat until the thermostat is removed in renovation. National information suggests that most old mercury-containing thermostats are removed by electricians and heating, ventilation, and cooling technicians who could easily return them to a jobber

for recycling. The technicians are licensed by the Construction Industries Board. The Board should consider including information about mercury thermostat recycling in the continuing education programs of its licensees.

Composting Organic Materials

Organic materials constitute a significant fraction of municipal solid waste. Composting organics stabilizes the material into an amendment that can be very useful for Oklahoma's poor soils.

There seems to be a growing demand from generators for more vendors capable of providing composting services. For example, Walmart is reportedly sorting and collecting organics from all of their Oklahoma operations. Large events like the Festival of the Arts in Oklahoma City have goals to make all of their food service wastes compostable. This would give such events the potential to divert virtually all of their waste from landfills. Potential compost providers should evaluate the potential of this growing market.

Measuring Recycling Efforts

There are no comprehensive data on quantities of materials recycled in Oklahoma. The recycling community and DEQ should review methods used by other states to determine recycling rates, and develop a dialog to determine if quantifying recycling activities is a valuable use of resources.

Public Outreach

The generators of recyclable materials (homeowners, apartment dwellers, businesses, schools, institutions, manufacturing plants,) need to receive information on a regular basis to increase recycling participation, improve the quality of materials set aside for recycling, and purchase products made from recycled content. DEQ should enhance public education regarding resource conservation.

Next Steps

The Act requires DEQ to develop and update a Recycling Priorities Plan. 27A O.S. 2-10-802 (C)(2). DEQ has contracted with the Oklahoma State University Cooperative Extension Service to organize a public discussion to solicit ideas for inclusion in the next update of the plan. That process began in December, 2011, and will continue through the spring. Anyone wishing to participate should contact Ilda Hershey (ilda.hershey@okstate.edu) at the Cooperative Extension Service.

DEQ must revise the plan and submit it for review by the Oklahoma Solid Waste Management Advisory Council. The Council review will provide an additional opportunity for public input.

References

Adler-Mckibben, Melissa (2011). *The Oklahoma Computer Equipment Recovery Act: A Summary of 2010 Manufacturer Reports*. Oklahoma Department of Environmental Quality.

Eilrich, Fred, Williams Corey Wren, Patton, Michael, and Rood, Fenton, and Doeksen, Gerald A. (2002). *Oklahoma Recycling And Reuse Employment Study: An Analysis Of The Economic Impact Of The Oklahoma Recycling End Users And Selected Recycling Activity In The Greater Tulsa Area*. Rural Development, Oklahoma Cooperative Extension Service, Oklahoma State University, AE-02036.