Notes of Materials and Markets Subcommittee
July-October 2012

Organics

Food waste is heavy and can't be economically transported over long distances. Local haulers cannot develop collection routes that are economically viable to them and/or their customers until there is sufficient processing infrastructure in place. PA 11-217 (effective 10/1/11) requires commercial food waste generators to divert source-separated organic materials for recycling (i.e. composting and/or anaerobic digestion) once a facility has begun operation within 20 miles of their business. This law may not be enough. Additional support, such as financial incentives and/or assistance may be needed to further spur business development and entrepreneurial innovation. To ensure a successful marketplace for finished compost (i.e., more facilities will increase amount of compost available) procurement guidelines should include compost and other organic recycling products.

C&D

Most C&D recovery for recycling is due to the market value of the materials and not because they are designated recyclables (with exception to old corrugated cardboard and scrap metal). Current reporting requirements to DEEP result in an estimated 7% recycling rate for C&D debris. However, this number does not represent all the recycling of C&D materials, because much of the C&D recycling collection is done on the job or work sites and either reused on-site (e.g., concrete and mixed rubble) and/or transported and processed out-of-state (e.g., ceiling tiles, gypsum wallboard). The greatest challenge is that most of our current processing facilities are not designed to recover materials for recycling. Volume reduction facilities (VRFs) were created to reduce the volume for transport out of state. Incentives should be created to encourage VRFs to convert their operations into recycling facilities. In addition, builders, contractors and others who are seeking to recycle more, need to be able to easily identify VRFs that process materials for disposal and those that recover materials for reuse and recycling and need to provide certification for LEED projects. Other opportunities include developing markets through state procurement.

Glass

Collection infrastructure for glass appears to be sufficient with both MSW recycling programs (curbside and transfer stations) and the beverage container deposit return process. Glass is one of the most easily recognizable items to recycle, however poses many challenges. Glass is heavy and can't be economically transported over long distances except possibly by rail. Single stream collection has increased breakage creating a lower quality end-product except for the facilities with capital to purchase technology for better separation. Also, most glass recycled in Connecticut does not move through material recovery facilities (MRF), but rather through the beverage container deposit return process. With the increased interest in local food systems, Connecticut has a few dairy farms and others in the dairy industry that sell reusable/refillable milk bottles, but no hard data exists as to what extent.

Markets exist for clean glass. However, Connecticut recycling facilities without the latest technology for better separation seek a break-even scenario at best. Redemption centers, which seek more options for managing large quantities of materials in an economically viable manner, are providing clean glass into the marketplace. Capital investment is needed, whether it is at existing recycling facilities or for the creation of 'secondary processing facilities' to increase the value of glass by cleaning and processing it to specifications for different manufacturers/markets. Other possibilities for increasing the value of glass involves recovering more clean glass through the existing container deposit system; increasing the deposit amount and/or including all glass bottles and jars.

Plastic

Collection and processing infrastructure for residential and small commercial plastics recycling appear to be sufficient, but more information is needed on commercial/industrial plastics collection and processing for recycling and reuse. There is at least one business in Connecticut known to process industrial plastics, but further research is needed on types and quantities of plastics in the commercial and industrial sector is generated and/or possible secondary processing opportunities exist.

Demand for plastics, including mixed rigid plastics, exceeds supply, yet only #1 and #2 plastics are required to be recycled in Connecticut. About 40% of plastic markets are domestic and 60% are international. Markets for plastic film, tubs and bulky rigids, including domestic markets, are growing. Plastics have active and involved trade associations working to increase plastics recycling such as the American Chemistry Council's Association of Postconsumer Plastics Recyclers, and NAPCOR.

How can Connecticut attract post-consumer plastics manufacturers to the state? Manufacturers need a continuous and sufficient supply of materials and currently that need is not being met. A variety of new products can be made from recycled plastic including pipes, buckets, pots, crates, automotive products, lumber, pallets, carpets, fleece, and other consumer products. Other options to consider include expanding designated recyclables to include #3 through #7 plastic containers, and possibly a tax on plastic bags.

Fiber

Old corrugated cardboard (OCC), magazines, newspapers, white & colored office paper and boxboard are required by state law to be recycled. Fiber makes up 51% of the recycling stream in Connecticut and 26% of the waste stream burned at Connecticut waste to energy facilities each year is made up of fiber. Fiber has many active and involved trade associations, including the American Forest and Paper Association, working to increase domestic fiber recycling. Also, a portion of recyclable and reusable textiles can be classified within the fiber category.

Fiber is recycled into newsprint, copy paper, phone directory paper, and other types of paper. As the demand for fiber drops corresponding with a decrease in print readership, recycled paper products will continue to decline. Drop in demand for print products is international. However, demand for OCC has increased with the increase in online shopping.

Sustaining the balance of supply and demand is the greatest challenge. There are paper mills in Connecticut. Weak consumer demand overstocks inventory at mills while weak material supply increases mills' purchase prices which is passed onto the consumer. About 40% of fiber markets are domestic and 60% are international.

Collection and processing infrastructure for fiber appears to be sufficient. Potential growth includes recovering more OCC and high grade papers from commercial sources. However, it's quite possible many large-scale commercial businesses currently bale on-site and market out-of-state. If they do, DEEP does not receive any data from these types of scenarios. The metrics could be improved by placing a mandate on brokers to report what they collect from grocery and other large retail stores.

State law requires newsprint and phone directory publishers to meet recycled content metrics. The State could consider mandating that all fiber purchased by State agencies be recycled products. In addition, tax incentives could be provided for local mills and other manufacturers who use local fiber.