

# Chapter 6

## Waste Diversion

### Introduction

This chapter reviews waste diversion in Clark County; waste diversion comprises all materials diverted from landfills through recycling or recovery operations. Waste diversion conserves and preserves both resources and energy. Waste diversion can reduce the production of greenhouse gases and the use of toxic chemicals in product manufacturing. Waste diversion conserves water, wildlife habitat and air quality, all of which contribute to public health, preservation of species, and may help to address climate change.

This chapter also reviews urban and rural residential recycling and organics collection programs as well as non-residential (institutional, commercial and industrial) programs, as well as, existing material recovery programs. The Washington Department of Ecology planning requirements for designating urban/rural service areas and residential recycling materials are also addressed in this chapter.

### The Waste Not Washington Act

In 1989, the Washington State Legislature passed the Waste Not Washington Act (RCW 70.95), resulting in major changes in the way Washington communities manage their wastes, including a revision of waste management priorities. The Washington State legislature recognized in passing the Waste Not Washington Act that “Considerations of natural resource limitations, energy shortages, economics and the environment make necessary the development and implementation of solid waste recovery and/or recycling plans and programs.” The legislature made recycling the next priority after reducing waste and reusing waste materials. The County’s recycling programs have focused on those materials that are most cost-effective to separate from the waste stream.

Clark County is incorporating into this Plan priorities for solid waste handling which place reuse and energy recovery at a higher hierarchy level than the state. The County will continue to emphasize “Reduce, Reuse & Recycle” in its program and messages. The County’s hierarchy is as follows:

- Waste reduction (prevention);
- Reuse;
- Recycling, with source separation of recyclable materials as the preferred method;
- Energy recovery of separated wastes;
- Incineration or landfilling of separated wastes;
- Energy recovery of mixed wastes;
- Incineration or landfilling of mixed wastes.

The State legislation established three goals:

- To achieve a 50% recycling rate where half of the waste stream will be recycled;
- To make recycling as affordable and convenient to the ratepayer as mixed waste disposal;
- To consider source separation as a fundamental strategy.

Washington State's *Beyond Waste Plan*, was issued in November 2004. The vision in this plan is as follows:

*We can transition to a society where waste is viewed as inefficient, and where most wastes and toxic substances have been eliminated. This will contribute to economic, social and environmental vitality.*

## **Oregon Opportunity to Recycle Act**

In addition to the requirements of the State of Washington, this Plan must also meet the State of Oregon's requirements. Oregon requires all out-of-state local government jurisdictions that use Oregon solid waste disposal facilities to comply with Oregon statutes. Because waste generated in the County is disposed at the Finley Buttes Landfill near Boardman, Oregon and the Wasco County Landfill near The Dalles, Oregon, the County and cities must also meet the applicable Oregon recycling requirements.

The foundation of Oregon recycling law is the 1983 Opportunity to Recycle Act (Oregon Revised Statute (ORS)459) which requires a convenient drop-off recycling location for source-separated recyclables in cities of less than 4,000 residents and curbside collection of source-separated recyclables in cities with populations of 4,000 or more, and includes a public promotion and education requirement that each person be notified of the opportunity to recycle and encouraged to source separate recyclables.

A major update of the law occurred in 1991; the additions incorporated as ORS 459A effectively expanded ORS 459 to include weekly curbside collection of recyclables with a durable recycling container provided, and also expanded the promotion and education requirement. The Act requires cities with population of at least 4,000 but less than 10,000 to choose three elements from a list of eight to expand their recycling programs; cities of 10,000 or more may choose to implement the first three elements on the list plus one more, or implement any five elements from the list. The program elements are:

- Durable recycling containers (i.e. curbside bins or carts);
- Weekly curbside recycling collection, the same day as garbage collection;
- Expanded promotion and education;
- Collection of at least four principal recyclable materials from each multi-family housing complex, having five or more units;
- An effective residential yard debris collection and composting program;

- Commercial and institutional recycling of source-separated materials from firms employing ten or more individuals and occupying 1,000 square feet or more in a single location;
- Expanded recycling depots and expanded education to increase depot use;
- Residential solid waste collection rates that encourage waste reduction, reuse and recycling, through reduced rates for smaller containers and a rate which does not decrease on a per pound basis for large containers.

In addition to these requirements for local governments, ORS 459A requires that landlords with five or more dwelling units, in cities that have implemented multi-family recycling service, provide recycling containers, on-site collection service, and recycling information. Recovery rate goals for Oregon counties, as specified in ORS 459A, vary with population. With regard to these goals, the Oregon Department of Environmental Quality (DEQ) considers Clark County to have similar characteristics to Portland metropolitan area counties, with a corresponding goal of 45 percent diversion of the County's total waste stream. Clark County exceeds these Oregon State requirements.

## What is Clark County's Recycling & Diversion Rates?

Clark County and its cities and towns are committed to achieving a minimum recycling rate of 50% of the waste stream through a combination of public and private recycling activities. The recycling rate is the percentage of all waste generated by residents and businesses that is recycled and manufactured into new products. In 2007, the most recent year for which County data is available, at least 256,105 tons of materials were recycled and 89,300 tons were diverted from a total waste stream of 619,024 tons. This estimate is conservative. It represents only reported collection activities; it does not count internal recycling programs, in which retailers return recyclables to distribution centers outside of the County, material collected by non-reporting collectors, or individual efforts such as backyard composting.

The recycling rate was 41.4% and the diversion rate was 55.8%. This recycling rate excludes waste diversion methods that the EPA does not define as recycling. Examples of diversion, but not recycling, include using wood waste, used motor oil and tires for energy recovery or using glass as fill or drainage rock. A further discussion of the County's recycling rate/diversion rate and how the rates are calculated is provided in chapter 15, *Waste Monitoring and Performance Measurement*. Historical information on the County's recycling and diversion rates can be found in Appendix J, *The Solid Waste Data Report*.

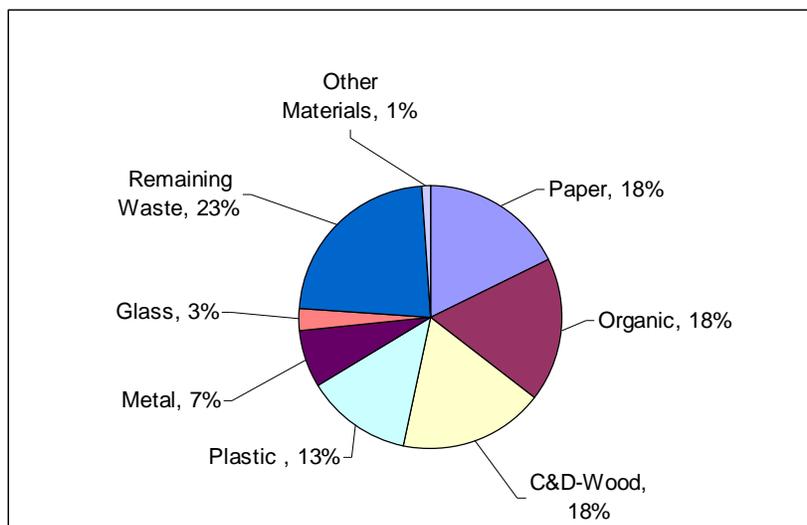
## Assessment of Conditions

### What is in Clark County's Waste?

The composition of the County's waste has undergone substantial change during the past decade. The change is the result of steadily increasing recovery levels for cardboard, papers, metals and wood; changes in packaging; and changing consumer buying patterns. The shift in waste composition both confirms the success of existing source-separation programs and identifies opportunities for additional recovery.

Figure 6-1 illustrates the composition of the garbage disposed by County households and businesses, according to a 2008 waste stream analysis. Additional information on waste stream quantities is available in chapter 15, *Waste Monitoring and Performance Measurement*. The 2008 *Waste Stream Analysis* can be found in Appendix I.

Figure 6-1  
What's Still In The Garbage?



All figures are percentages of weight.

### **Diversion – Recycling**

Recycling is the collecting of recyclable materials that would otherwise be considered waste, sorting and processing those materials, and then manufacturing them into new “recycled content” products.

### **Contracted Residential Recycling**

Contracted curbside collection is the predominant recycling method for both single-family and multi-family residential recycling within the Clark County urban service area. Subscription-based curbside recycling service is available in the rural areas. Single family households, including those with up to four attached dwellings with individual garbage collection, are provided three bins for collection: one for newspaper; one for mixed paper; and one for containers, including aluminum cans, glass, plastic bottles and polycoated paper. Cardboard, motor oil, antifreeze, household batteries and scrap metal are placed next to the bins on collection days. Residents in multi-family housing are provided with in-home containers for storing and transporting their recyclables to labeled, wheeled carts in central collection areas within their complexes. The County will be transitioning to a cart based collection system for single family and multi-family residences. The cart will contain commingled

materials with glass collected in a separate bin next to the cart. Motor oil, antifreeze and household batteries will continue to be collected next to the cart.

## **What Can Be Recycled?**

Clark County's curbside recycling program includes a thorough list of materials that can be recycled. Evaluation of this list is on-going. Criteria includes the potential for waste diversion; collection efficiencies; processing requirements; market conditions; market volatility; local market availability; continuity with existing programs; and Oregon recycling certification requirements.

Few material changes have occurred in recycling the curbside program since its inception. The County and cities added all plastic bottles, #1-#7, to household collection programs in 1995, and in 2002 antifreeze, household batteries, and aerosol cans were added. Clark County recycling collection programs can now be considered mature, and the following materials will be considered "designated residential recyclables" for the purpose of meeting the Washington Department of Ecology planning guidelines:

- Aluminum cans and foil;
- Corrugated cardboard;
- Glass jars and bottles;
- Household batteries;
- Mixed paper;
- Motor oil and antifreeze (not included in the multi-family program);
- Newspapers;
- Plastic bottles, excluding those contaminated by hazardous materials;
- Polycoated paper (e.g. milk cartons and drink boxes);
- Scrap metal;
- Steel cans, including spray cans;
- Yard Debris (Yard debris is separately collected from single-family residences, on a subscription basis.)

Tubs and some rigid plastic containers will be added to the material stream with the implementation of the cart system.

In addition to the materials listed above as "designated residential recyclables", the following items are also recycled through on-going or seasonal programs and specially scheduled collection events within Clark County: auto hulks, carpet pads, chlorofluorocarbons, e-waste (including computers, monitors, TV's and other electronic materials), fluorescent tubes, latex paint, lead acid batteries, mercury (including mercury containing products), oil filters, tires (limited recycling, based upon available markets), vector waste, block Styrofoam, other plastics, and white goods (e.g. dryers, refrigerators, washers).

Additional materials will be considered on a case-by-case basis, as emerging markets become available. Potential additions include household food waste, pre-consumer business food waste, textiles, ceramics and (non-container) glass. Concrete, asphalt and brick are currently recycled from construction and demolition projects. These materials might be currently recyclable, but are not necessarily appropriate to include as designated recyclables at this time. The County's recycling collection and processing contracts have provisions for adding materials to the residential curbside collection program. The County will also notify the Washington Utilities and Transportation Commission (WUTC) of such changes.

## **Recycling Collection Services**

Currently WCI has contracted with the County and the cities of Battle Ground, La Center, Ridgefield, and Yacolt to provide residential recycling collection services (both single family and multifamily) within those cities and also in all of the unincorporated areas of Clark County. This service is provided on a subscription basis with weekly collection in the Urban Service Area and every other week collection in the rural areas. Recycling collection service is required for households in the unincorporated Urban Service Area who subscribe to garbage collection service of at least one pick-up per month.

The City of Vancouver contracts for residential recycling collection services (both single family and multifamily) with WCI. The cities of Camas and Washougal have separate contracts with Evergreen Waste Systems (now a WCI company) to collect recyclable materials from both single-family and multifamily residences within their jurisdictions.

## **Urban Residential Organic Wastes**

Organic waste (or "organics") is a broad term which includes yard debris, pre- and post-consumer food waste, contaminated non-recyclable papers, such as tissue and used coffee filters and other potentially compostable source-separated materials. Organics are different from other recyclable materials in that they often can be managed and used at home by residents. The County actively promotes backyard composting as a waste reduction method as described in chapter 4, *Waste Prevention and Reduction*. Backyard composting avoids the economic and environmental costs of operating collection systems and centralized processing facilities.

However, not all residents have the ability or desire to compost their yard debris and/or other organics at home. For those residents, collection services are important. All single-family residences within the County's defined Urban Growth Area and the Southwest Clean Air Agency's Burn Ban area have yard debris collection available on a subscription basis. There is more discussion of yard debris and other organic wastes in chapter 13, *Organic Wastes*.

## **Residential Recycling Collection Service**

The single-family collection service program provides each household with three collection bins. The bins are used to collect newspaper, mixed paper and containers,

including plastic, glass, metal, and polycoated paper. In addition to the materials collected in the bins, cardboard, metal, used oil, antifreeze and household batteries are also regularly collected. The County will be transitioning to a cart based collection system for single family and multi-family residences. The cart will contain commingled materials with glass collected in a separate bin next to the cart. Motor oil, antifreeze and household batteries will continue to be collected next to the cart.

The multi-family collection service program provides each complex with 60- or 90-gallon collection carts, signage for the central collection areas, and in-home containers for storing and transporting materials to the central collection areas. The carts are used to collect newspaper, mixed paper and containers, including plastic, glass, metal and polycoated paper. Multi-family collection schedules are set to meet the requirements of each complex.

Weekly collection services are provided for single family residents in Battle Ground, Camas, Ridgefield, Vancouver, Washougal and the unincorporated Urban Service Area. Every-other-week collection services are provided for single family residents in La Center, Yacolt and the unincorporated Rural Service Area.

Residents may also deliver their materials to transfer stations (including household hazardous waste), public drop-off centers or newspaper and aluminum drop-off containers. Public drop off sites include:

- CRC's three transfer stations
  - Central Transfer and Recycling Center
  - West Van Materials Recovery Center
  - Washougal Transfer Station
- Air, Water, Earth Recycling

Recycling Collection events are scheduled periodically throughout the year to collect special items including computer, household hazardous waste, tennis shoes, various plastic items, and block foam. [www.2good2toss.com](http://www.2good2toss.com) is available on-line to provide residents with a mechanism to exchange and reuse items with other residents.

## **Non-residential (Commercial) Recycling**

Under current law, all non-residential recycling and collection of yard waste for composting may occur in a competitive market place. Solid waste haulers, disposal companies, private recyclers, private composters and individual collectors are allowed to make collection arrangements with non-residential generators, adhering to the following jurisdictional licensing requirements.

Clark County has a competitive commercial recycling environment, with commercial recycling services provided by a variety of service providers. Some operators specialize in paper fibers such as office papers or corrugated cardboard, or in wood wastes, while others offer a full array of services for most commodities. The County actively supports commercial recycling through technical assistance programs and promotional educational materials. The degree of source separation required varies by vendor. Source-separated recyclables may be commingled (combined with other source-separated recyclables) to increase collection efficiencies. The recently

implemented Cardboard Plus program allows commercial businesses to bag bottles, cans and other containers in a clear plastic bag and place in the cardboard containers. Mixed paper, office paper, and newspaper may also be placed “loose” in the cardboard containers. Materials are sorted out at processing destinations.

The City of Vancouver regulates commercial recycling haulers. All recycling collectors obtain from the City a license which is renewed annually. Licensed recyclers must comply with the code requirements and are only to collect source-separated recyclables. An annual report on tons or cubic yards collected is required at the end of each year. Clark County will be developing a similar program for registering commercial recycling haulers.

### **Non-residential (Commercial) Organic Wastes**

Under current law, all non-residential recycling and collection of yard waste for composting may occur in a competitive market place. Solid waste haulers, disposal companies, private recyclers, private composters and individual collectors are allowed to make collection arrangements with non-residential generators, adhering to jurisdictional licensing requirements.

The County is currently working with a pilot program with the school districts, restaurants, and institutional entities in development of such non-residential food waste collection programs. In conjunction with this pilot, food waste is considered to be a part of the MSW waste stream. There is more discussion of these programs in chapter 13, *Organic Waste*.

### **Processing and Recovery**

The County’s contract with Columbia Resource Company (CRC) is for the processing of residentially collected recyclables. Recyclable materials received through the curbside and multi-family collection programs are marketed by CRC and a portion of the revenue generated from the sale of these materials is returned to the County, City of Vancouver, and contract hauler.

Recycling collection services are supported by County, city, and private collector promotion and education efforts, as described in chapter 5, *Education and Promotion*.

CRC’s transfer and disposal contract with the County requires the company to recover and recycle a minimum of 10% of the incoming disposal stream.

CRC meets its minimum annual recycling requirement by recovering materials from selected loads on the tipping floor. Most recovery is wood and metal, pulled from loose drop-box or self-haul loads. Very little is recovered from compacted loads of mixed waste, due to contamination and operational difficulties. Source-separated materials delivered to CRC drop-off recycling facilities by self-haulers is counted toward the minimum annual recycling requirement; however, materials recovered through CRC’s source-separated recycling collection services and materials collected by County and city recycling collection contractors are not included.

## Recommendations

1. Continue and expand existing public education and promotion for residential and non-residential recycling.
2. Periodically evaluate the range of recyclables handled by the recycling collection program to determine whether materials should be added or dropped.
3. Support improvements in recyclable collection programs to ensure that advancing technologies in commingling and co-collection are pursued to the fullest extent possible to minimize program costs and maximize diversion.
4. Support improvements in handling, sorting, processing and marketing the recyclables collected and delivered to CRC in order to maximize the resource value retained.
5. Continue to encourage non-residential recycling through incentives, technical assistance, pilot programs, and recognition programs. Utilize as needed, WCI Waste Reduction Coordinators in helping businesses develop diversion programs for recycling and food waste recovery.
6. Encourage our contracted service providers (CRC and WCI) to use their best efforts to attain and maintain ISO 14001 certification for their operations in Clark County.
7. Work with the Washington Utilities and Transportation Commission (WUTC) and WUTC-certificated haulers to develop rate structures that support and encourage waste reduction and recycling; evaluate the rate structure for recycling rates.
8. Develop a program for registering commercial recycling haulers and tracking tonnage data in the unincorporated areas.