

Lane Wasteshed 2010 Recovery Plan Update

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I. Introduction

This Document serves to comply with the requirements set forth in Oregon Administrative Rule (OAR) 340-090-0040(6) to provide DEQ with a Wasteshed Recovery Plan in 2001 and Plan Updates in 2006 and 2010.

Delivery date of this Plan Update was delayed by the requirement to conduct a technical review pursuant to OAR 340-090-0040(7), triggered by the Lane wasteshed failure to meet the 2009 recovery rate of 54% as set forth in OAR 340-090-0050(19).

The following pages contain the results of the technical review effort implemented on 3/1/2011 and completed on 12/7/2012. Data review parameters were set to use the most current three years available at that time, 2007-2009. During the course this work (late in 2011) the 2010 recovery rate for the wasteshed was reported to be 57.4%. This was well above the wasteshed goal of 54% and was most likely due to the voluntary nature of private metals recycling reporting. The technical review was well underway and it was decided to continue as a productive exercise. In October 2012, DEQ reported that Lane County had the highest recovery rate in Oregon at 61.5 % in 2011. For this reason, while data calculation for the technical review had already been completed using 2007-09, the program review and description section was augmented to include the public and private waste reduction efforts that were implemented after 2009. In effect, illustrating how Lane County wasteshed has come to reach, and can maintain, a recovery rate at or above the 2009 goal of 54%.

This Technical Review Report will serve as the Lane Wasteshed Recovery Plan Update as it describes what programs and policies are currently in place through the jurisdictional structure of authority that facilitates and encourages maximum recycling from communities throughout the wasteshed, and further contains the most likely recommended policies and programs that will be considered in the future.

Note: Anticipated tons of increased recovery are not calculated in this plan update, because as shown below the existing programs and efforts are sufficient to maintain Lane Wasteshed recovery rate at levels above and beyond the 2009 goal of 54%.

II. Recovery Rates

Year	1996	2000	2003	2004	2006	2007	2008	2009	2010	2011
Calculated	39.1%	45.8%	46.0%	45.0%	46.9%	46.3%	46.4%	46.1%	51.4%	55.5%
Credits*	-	6%	6%	6%	6%	6%	6%	6%	6%	6%
Total	39.1%	51.8%	52.0%	51.0%	52.9%	52.3%	52.4%	52.1%	57.4%	61.5%

III. 2011 Technical Review

LANE COUNTY WASTESHED TECHNICAL REVIEW

PURPOSE

In compliance with OAR 340-090-0040(7), Lane County conducted a Technical Review of solid waste systems within the wasteshed in 2011-12. The review is required by the Oregon Department of Environmental Quality (DEQ) because Lane County's recovery rate was 1.9% below the recovery goal of 54% for 2009.

The goal of this technical review is to assess the effectiveness of current efforts and identify possible methods of increasing the wasteshed-wide recovery rate.

During the course of the Technical Review, the 2010 recovery rate for the wasteshed was calculated at 57.4%. This is an increase over the 2009 rate of 52.1% and exceeds the wasteshed goal of 54%. This was largely due to the fact that some private metals recycler had not reported their recycling totals to DEQ prior to 2010. The annual Material Recovery Survey released in October 2012 by DEQ found that Lane County had the highest recovery rate in Oregon at 61.5 percent in 2011.

Despite this, Lane County determined the Technical Review would still be of value to identify gaps and improvements in waste reduction programs, and provide insight and direction for an update to the county's Solid Waste Management Plan.

Further, Lane County is required by state law to provide the DEQ with a Wasteshed Plan Update (WPU) which maps out what the County, cities, private collectors and other service providers within the wasteshed will do to maintain and improve the recovery rate of 54%. This Technical Review will provide the groundwork analysis for the WPU.

This report has been prepared to present the results and findings of the Technical Review. The Technical Review was conducted by Chris Bell of Bell & Associates, Inc. and Delyn Kies of Kies Strategies in close coordination with Sarah Grimm, Waste Reduction Specialist for the Waste Management Division, Lane County Public Works.

DATA COLLECTION AND ANALYSIS

Methodology

The methodology for the Technical Review was developed to meet the following objectives:

1. Collect available data to identify the current impact and effectiveness toward the recovery rate for nine jurisdictions within the wasteshed.
2. Analyze the data to identify potential programs or actions that can be taken to continue improvement of the recovery rate for the wasteshed.
3. Comply with State regulatory requirements.

The following nine jurisdictions within the Lane County wasteshed are included in the scope of this Technical Review because each has the responsibility and the authority to manage waste and recycling systems through franchise agreement, code, policy and public information/promotion.

- 1) Eugene,

- 2) Springfield,
- 3) Eugene-Springfield inside Urban Growth Boundary, outside City limits
- 4) Cottage Grove,
- 5) Creswell,
- 6) Florence,
- 7) Veneta,
- 8) Junction City, and
- 9) Lane County Unincorporated (outside Urban Growth Boundary of above cities).

Data Collection

A request for information was prepared and submitted to each jurisdiction and all haulers providing collection services within those jurisdictions. The information request included a list of interview questions and interviews were conducted and summaries prepared. Data received was compiled by jurisdiction.

Additional data was gathered and reviewed to supplement the information gathered from jurisdictions and haulers. These included the following:

- Annual Hauler Recycling Reports
- DEQ Quarterly Disposal Report Data
- DEQ 2009/10 Waste Composition Study
- DEQ Opportunity to Recycle Reports
- Population Research Center, Portland State University Demographics Data
- Lane County Incoming Waste Data
- Lane County Planning Department (housing and business data)

Data Limitations

There are several factors that impact the calculation of the recovery rate in the Lane County watershed and subsequently, the ability to accurately plan and project results from new or improved recovery programs.

Difficulties encountered in the course of completing this Technical Review included the following:

- **Data Gaps.** This includes variations from year to year and significant changes impacting the numbers like the change from source separation to comingling of recyclables.
- **Conversion Errors from Volume to Tons.** Only commercial account loads are weighed at the three scales in operation by the County: the Glenwood Transfer Station, Florence Transfer Station and the Short Mountain Landfill. Tons by haulers at other sites are estimates based on volume; therefore the level of precision is considerably lower.
- **County Authority and Limitations.** Voluntary reporting provided limited and/or inconsistent data by material type, by program type, sector, or by hauler and geographic area for example.
- **Propriety Information.** The scope of this study is not able to include the recycling activities of private commercial and industrial businesses. While DEQ conducts extensive voluntary surveying of the private sector recyclers, there is currently no jurisdictional authority that allows the County to collect this data which is considered proprietary information. For example, total waste reported as self-haul directly to Short Mountain Landfill is primarily from large commercial and industrial generators that likely arranged for recycling through private companies. In 2007, for example, 145,711 tons of recycling occurred outside the collection systems detailed in this report.

For the purposes of this Technical Review, these gaps and limitations do not affect, nor invalidate the general findings and program recommendations for consideration. However, improving the accuracy and reliability of data collection and tracking will assist in future program planning to increase the material recovery rate for the Lane County wasteshed. The recommendations of this report suggest ways that data collection and analysis going forward could be improved for planning and reporting purposes.

Data Analysis

This section provides a summary of the results of the analysis of the data collected for the Technical Review.

Waste Composition Data Results

The DEQ conducted a statewide waste composition study in 2009/2010. Lane County paid for the additional sampling to complete a statistical analysis of Lane County waste composition. Data was collected and reported in subsets of waste delivery methods (i.e. residential route truck, commercial route truck, mixed route, drop box, and self-haul. The results were utilized as a means to determine what additional recoverable materials could be diverted from the waste stream. The following table is a summary of the materials remaining in the Lane County waste stream (as a percentage of the weight).

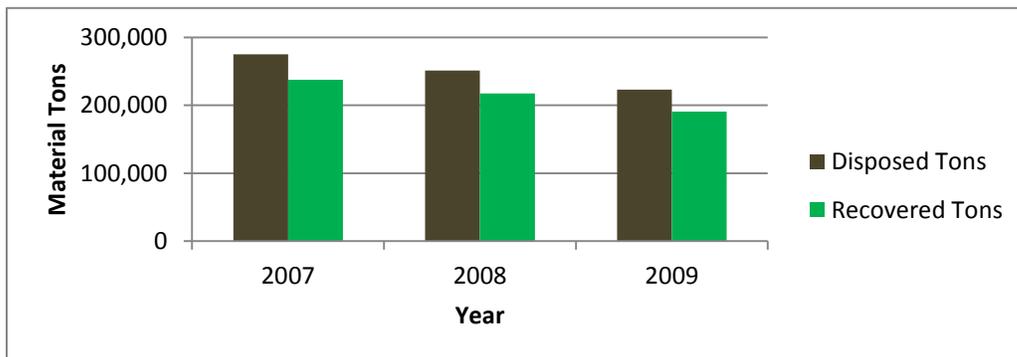
Table 1: DEQ 2010 Waste Composition Study for Lane County

Material	% of Waste by Weight
Cardboard	2.58%
Other Recyclable Paper	5.81%
Other Non-Recyclable Paper	7.22%
Plastic Packaging	4.80%
Plastic Products	4.83%
Yard Debris	5.82%
Clean Lumber & Hogged Fuel	6.49%
Painted & Treated Lumber	2.40%
Other Wood Products	4.82%
Food	17.85%
Carpet, Rugs, Fiber Pads	3.21%
Textiles	3.97%
Other Misc. Organics	3.01%
Asphalt Roofing & Tarpaper	4.09%
Glass Containers	1.11%
Other Glass	0.84%

Metal Food & Beverage Containers	0.98%
Nonferrous & Ferrous Metals	3.22%
Other Metal	1.76%
Computers, Brown Goods, Appliances	1.18%
Rock, Dirt, Brick & Concrete	2.97%
Gypsum Wallboard	1.81%
Other Inorganics	4.91%
Medical Waste	0.30%
Hazardous Waste	0.65%
Misc. Remainder Materials ¹	3.37%
Total	100.00%

¹ Tires, rubber products and disposable diapers (3.23% combined), for example.

The following bar graph shows the Total Wasteshed Tons Disposed and Tons Recovered: 2007, 2008 and 2009. **Chart 1: Lane County Disposal Tons Compared to Recovered Tons**



Collection, Disposal and Demographic Data Results

The tables in this section summarize collection and disposal account data for Lane County facilities (transfer stations/landfill) by source (haulers, private vehicles, self-haul from transfer stations) and by material type (aggregated)—a large portion of which is recorded in cubic yards and uses an estimated tons conversion. The results are presented by jurisdiction.

Waste amounts by jurisdiction and by hauler were extrapolated from scale house data provided by the Lane County Waste Management Division. Recycling data is from the annual recycling reports submitted by collection companies to DEQ through the Lane County wasteshed

representative. Data was collected in early 2011 and includes the three consecutive calendar years - 2007, 2008 and 2009, for which full year data was available.

Demographic data for incorporated jurisdictions as well as unincorporated Lane County is also summarized. Population estimates are based on 2010 Portland State University Population Research Center data certified to incorporate Census 2010. In addition to population for each jurisdiction, the number of businesses, single-family residences and multi-family / mobile home properties are given because these differing property types have varying waste and recycling service requirements and impacts.

Eugene

The City of Eugene utilizes a licensed competitive open market system for the collection of waste and recycling. Customers can choose the service provider. There are eight collection companies currently licensed with the City of Eugene. Two of these companies, Coburg Sanitary and Waste Reduction Services, do not actively collect waste within city limits. Residential waste services include weekly waste collection with curbside recycling and yard debris collection. Commercial collection includes recycling services as well as food waste collection. The City of Eugene uses license fee revenues to fund green building, composting and waste prevention programs. Customer-provided information varies from hauler to hauler, but city staff actively engages in monitoring and improving education and implementation of waste reduction programs.

	Population	Single-Family	Multi-Family	Business
Eugene	157,845	54,957	24,233	7,023

The following table summarizes the amounts of collected material by the licensed haulers within the City of Eugene. Demographic data follows including population, number of single-family and multi-family-residences, and number of businesses.

Table 2: City of Eugene Collection Data (tons)

Collection Services	2007	2008	2009
Commingled Mix	19,076	27,512	23,074
Yard Debris / Organic	13,469	13,457	13,583
Total Recycle Tons	32,545	40,970	36,657
Disposed Tons	77,224	72,536	70,557
Collection Diversion	30%	36%	34%

Springfield

The City of Springfield has an exclusive franchise with Sanipac for collection services. Residential services include weekly collection of waste and recycling; subscription yard debris collection is available. Commercial collection services include waste and recycling collection. The City of Springfield's sole franchised hauler provides quarterly newsletters and recycling promotion. Springfield Municipal Code 7.346 requires rental property owners to provide recycling.

	Population	Single-Family	Multi-Family	Business
Springfield	58,575	22,837	5,503	2,034

The following table summarizes the amounts of collected material by Sanipac within the city limits of Springfield.

Table 3: City of Springfield Collection Data (tons)

Collection Services	2007	2008	2009
Commingled Mix	6,824	10,990	9,532
Yard Debris / Organic	788	1,888	2,441
Total Recycle Tons	7,612	12,878	11,972
Disposed Tons	28,969	27,388	25,680
Collection Diversion	21%	32%	32%

Eugene-Springfield Urban Growth Boundary

Note: For the purposes of this report, the wasteshed areas that fall under Lane County jurisdiction are segregated into two sections: Eugene-Springfield Urban Growth Boundary (UGB) and Unincorporated Lane County. The Eugene-Springfield UGB is separately designated because it is the largest portion of the total wasteshed UGB. The Eugene-Springfield UGB means the immediate areas surrounding Eugene and Springfield, outside the city limits but within the urban growth boundaries of these cities. Unincorporated Lane County (described later) includes all the remaining areas of the county and UGBs of the smaller jurisdictions included in this report. State rules and statutes require Lane County to enforce applicable elements of the Opportunity to Recycle Act only in UGB areas of cities of 4,000 or more.

Collection of waste and recycling is an open market for Lane County. Residents and businesses choose their service provider. Collection services may include curbside recycling and business recycling which vary based on the services offered by each company and the needs of the customer. The four primary collection companies that offer service within the Eugene-Springfield Urban Growth Boundary are Sanipac, Lane Apex, Royal Refuse and Countryside Disposal.

The following table summarizes the amounts of collected materials by the four haulers.

Table 4: Eugene-Springfield Urban Growth Boundary Collection Data (tons)

Collection Services	2007	2008	2009
Commingled Mix	3,874	4,701	3,826
Yard Debris / Organic	767	1,030	1,156
Total Recycle Tons	4,641	5,731	4,892
Disposed Tons	14,954	13,816	13,273
Collection Diversion	24%	29%	27%

Lane County operates the Glenwood Transfer Station for both residential and commercial self-haul customers. The private collection companies are also permitted to use this central location. Recycling drop off is available at the facility for over two dozen material types. Self-haul residents and businesses from Eugene, Springfield and the UGB are the primary users. The following table summarizes the amount of waste delivered to Glenwood Transfer Station by self-haulers, both residential and commercial.

Table 5: Eugene-Springfield Urban Growth Boundary Self-Haul Data (tons)

Transfer Station	2007	2008	2009
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Waste Tons	34,925	31,072	26,848
Recycle Tons	5,750.4	5,559.8	7,987.1
Self-Haul Diversion	14.0%	15%	23%

Cottage Grove

Waste and recycling collection services within the City of Cottage Grove are provided exclusively by Cottage Grove Garbage Service. Services include waste and recycling collection. No curbside yard debris collection services are offered within Cottage Grove. Minimum standards of the Opportunity to Recycle provisions are met with information inserted in billings twice a year. Lane County operates a transfer station that caters to self-haulers, with recycling drop-off including yard debris, wood waste and beginning in 2009, electronics.

	Population	Single-Family	Multi-Family	Business
Cottage Grove	9,495	3,584	594	536

The following table summarizes the collection service and drop off tons for Cottage Grove.

Table 6: Cottage Grove Collection and Self-Haul Data (tons)

Collection Services	2007	2008	2009
Disposed Tons	7,288.84	6,703.95	5,958.82
Commingled Mix Tons	1,057.77	989.59	832.02
Collection Diversion	13%	13%	12%

Cottage Grove Transfer Data

Transfer Station	2007	2008	2009
Self-Haul Waste Tons	3,847	3,586	3,410
Self-Haul Recycle Tons	1,283.97	1,281.33	1,241.08
Self-Haul Diversion	25%	26%	26%

Creswell

Waste and recycling services are provided exclusively by P&J Disposal which was acquired by Sanipac in 2009. Minimum standards of the Opportunity to Recycle provisions are met with information in formatted flyers and infrequent news items. Lane County also operates a transfer station for self-haulers and for drop off of recyclable materials.

	Population (2011)	Single-Family	Multi-Family	Business
Creswell	4,845	1,989	219	170

The following table summarizes the collected and self-haul tons for Creswell.

Table 7: Creswell Collection and Self-Haul Data (tons)

Collected	2007	2008	2009
Disposed Tons	2,331.36	2,301.13	2,201.40
Commingled Mix Tons	306.59	237.09	247.57

Collection Diversion	12%	9%	10%
Transfer Station	2007	2008	2009
Self-Haul Waste Tons	2,402	2,294	2,178
Self-Haul Recycle Tons	562.32	571.22	488.38
Self-Haul Diversion	19%	20%	18%

Florence

Florence is the largest incorporated coastal city in Lane County. Collection services are provided by two companies that compete on service. In the past, the rate was set using a range, but was recently changed to a fixed amount. Florence has an active Environmental Management Advisory Committee (EMAC) that focuses on waste reduction. City staff, EMAC, franchised haulers and an active Master Recycler Program work together to proactively manage education and outreach. Florence's Solid Waste Code 9-4-6-1 P requires multi-family property owners to provide tenant recycling. The County operates a transfer facility for licensed haulers and small business and residential self-haulers. Full recycling options are provided including yard debris, wood waste and in 2009, electronics.

	Population	Single-Family	Multi-Family	Business
Florence	9,590	5,343	982	596

The following table summarizes the collected and self-haul tons for Florence.

Table 8: Florence Collection and Self-Haul Data (tons)

Collection Services	2007	2008	2009
Disposed Tons	10,686	9,306	8,774
Commingled Mix	1,534.08	1,569.90	1,502.79
Yard Debris / Organic	-	-	-
Total Recycle Tons	1,534.08	1,569.90	1,502.79
Collection Diversion	13%	14%	15%

Transfer Station	2007	2008	2009
Self-Haul Waste Tons	4,319	3,900	3,405
Self-Haul Recycle Tons	857.55	471.25	1,325.21
Self-Haul Diversion	16.5%	11%	28%

Veneta

Waste collection and recycling is provided exclusively by County Transfer & Recycling, a Waste Connections company acquired by Sanipac in 2009. Veneta residential service includes collection of waste, recycling, and yard debris (April and November). Commercial collection includes waste and recycling services. Education materials include distributed flyers and brochures. Lane County operates a heavily used transfer facility in Veneta that serves the self-hauler with full recycling options.

	Population	Single-Family	Multi-Family	Business
Veneta	5,035	1,722	173	158

The following table summarizes the waste collection and self-haul activity for Veneta.

Table 9: Veneta Collection and Self-Haul Data (tons)

Collection Services	2007	2008	2009
Disposed Tons	2,654	2,422	2,207
Commingled Mix	500	506	458
Yard Debris / Organic	281	319	430
Total Recycle Tons	781	825	888
Collection Diversion	23%	25%	29%
Transfer Station	2007	2008	2009
Self-Haul Waste Tons	4,190	3,480	3,528
Self-Haul Recycle Tons	1,038.36	812.62	809.30
Self-Haul Diversion	19.8%	18.9%	18.6%

Junction City

Junction City is one of a few cities in Oregon that provides municipal collection services to residents through their public works department. Opportunity to Recycle education elements are met through a semi-annual newsletter. Commercial collection is an open market system. Royal Refuse and Allied Waste of Corvallis are the only companies providing the service.

	Population	Single-Family	Multi-Family	Business
Junction City	5,670	2,104	620	286

The following table summarizes the collected material tons for Junction City.

Table 10: Junction City Collection Data (tons)

Collection Services	2007	2008	2009
Disposed Tons	2,720	2,382	2,406
Commingled Mix	531.64	623.38	577.36
Yard Debris / Organic	-	30.00	206.25
Total Recycle Tons	531.64	653.38	783.608
Collection Diversion	16%	22%	25%

Self-haul disposers of waste and recycling use either Low Pass transfer station on Highway 36, or the Glenwood Transfer Station.

Unincorporated Lane County

As noted above, Unincorporated Lane County represents all areas outside of the city jurisdictions described above (Eugene, Springfield, Eugene-Springfield UGB, Cottage Grove, Creswell, Florence, Veneta and Junction City). The County does not regulate the collection of waste or recycling. All collection services are provided by local haulers in an open market system; therefore, levels of service, pricing and recycling options vary widely. While recycling services and education materials provided to collection service customers is unknown, Lane County staff actively provides extensive recycling education and outreach county-wide including brochures at public access points, radio and television ads, newspaper ads and articles, and website information.

	Population	Single-Family	Multi-Family	Business
Unincorporated County	97,495	106,419	29,852	10,411

The following six collection companies provide collection services to customers in rural Lane County outside the urban growth boundary:

Coburg Sanitary	Star Garbage
McKenzie Disposal	Ecosystems
Oakridge Sani-Haul	Allied Waste of Corvallis

The following table summarizes the reported waste and recycling tons collected by these haulers. Demographic data follows including population, number of single-family and multi-family residences, and number of businesses.

Table 11: Unincorporated Lane County Collection Data (tons)

Collection Services	2007	2008	2009
Commingled Mix	6,223	5,276	4,269
Yard Debris / Organic	160	383	495
Total Recycle Tons	6,383	5,658	4,764
Disposed Tons	17,305	15,420	13,136
Collection Diversion	27%	27%	27%

The County operates several disposal and recycling transfer stations for self-haulers located throughout the County. These transfer sites are not equipped with scales to receive licensed hauler loads (exceptions are made at the furthest outlying sites to accommodate haulers' need for time and fuel efficiency —McKenzie and Oakridge) and the small quantities of commercially generated materials are described as self-haul.

The following table details the incoming waste tons by site and summarizes the diverted materials delivered by residential and commercial self-haulers.

Table 12: Incoming Self-Haul Waste and Recycling Data by Transfer Site (tons)

Transfer Site Location	2007	2008	2009
London	243	203	189
Low Pass	753	654	623

Mapleton	108	86	86
Marcela	838	591	675
McKenzie	336	363	262
Oakridge	860	734	873
Rattlesnake	1,699	1,441	1,456
Sharps Cr	209	205	211
Short Mt.*			
Swiss Home	299	243	279
Vida	917	847	782
Walton	143	109	111
Self-Haul Waste Tons	6,405	5,476	5,547
Self-Haul Recycle Tons	1,953	1,906	1,371
Self -Haul Diversion Rate	23.3%	25.8%	19.8%

*Note: the Short Mountain tons are omitted here because they describe self-haul loads from large business and industrial account holders whose recycling is very likely provided by private sector recycling activities that are not calculated into this technical review process.

Program Analysis

The following table notes the key waste reduction programs provided by each City. Information was gathered from Opportunity to Recycle Reports submitted to DEQ and from individual City's responses to the request for information for this Technical Review.

Table 14: Summary of Current City Waste Reduction Programs

	Eugene	Springfield	Cottage Grove	Creswell	Florence	Veneta	Junction City
Recycling Drop-Off at Disposal Site	√	√	√	√	√	√	
Weekly Residential Curbside Collection	√	√	√	√	√	√	√
Education & Promotion	√	√		√	√	√	√
Residential Recycling Containers	√	√	√	√	√	√	√
Multi-Family Recycling	√	√		√	√	√	
Residential Yard Debris Collection for Composting	√	√			√	√	√
Commercial & Institutional Recycling	√	√	√		√	√	
Expanded Recycling Drop-Off Depot					√		
Waste Reduction Rate Incentive	√	√			√	√	
Commercial & Institutional Collection Composting	√				√		

Additional efforts and effective programs of note include the following:

- Since 2003, Lane County has used its landfill tip fee structure to incentivize the diversion of marketable construction and demolition materials through mixed waste processing. Material Recovery Facilities accepting mixed dry waste receive a 50% tip fee reduction on residual disposal when they demonstrate that their facility captures and recycles over 25% of wastes

received. Self-haul transfer station users at Glenwood, Cottage Grove and Florence have reduced fees for wood and yard debris. Cardboard, plastic film and scrap metal recycling is free.

- At least three private companies accept and market residential and commercial commingled recyclable materials that are collected by licensed haulers.
- Two of these three private companies also operate material recovery facilities accepting construction and demolition (C & D) debris loads for processing and marketing.
- There are two active and successful private compost operations within Lane County, another within an hour's drive north and another in the process of being developed.
- Lane County's popular Master Recycler Program serves urban and rural communities with three 9-week trainings per year. Over 600 people have completed the training to date. Over 400 master recyclers actively volunteer in public outreach and education, hands-on event recycling and collection efforts, recycling promotions and collections in their neighborhoods, work places, churches and community groups.
- Lane County employs one FTE to manage contracts and coordinate an extensive public education program that serves all communities county-wide. Over 5,000 students and 11,000 adults are personally introduced to, or reminded of, the importance of recycling and the convenient opportunities available for them. Radio, television and print advertising are used, as well as news releases and articles in local newspapers. Recycling information brochures are distributed to community outlets as available.
- Since 2001, Lane County Waste Management has worked closely with its community to increase event recycling and zero waste events. In 2007 the County received a grant to create an event recycling bin loan program. As a result of this work, private enterprise has added to the increase in event recycling. From the Lane County Fair and the Olympic Track and Field Trials, to city celebrations and music festivals, bins are borrowed for nearly 100 events annually.
- The nonprofit thrift and reuse sector is well represented with several branching out into innovative recycling of mattresses, small scrap lumber, candle wax and other items.
- Lane County and the City of Eugene partner to provide the tools, resources--and an Incentive Grant of \$500 to schools throughout Lane County that participate in the Oregon Green Schools Certification Program

The following additional programs were implemented after the 3 reporting years of this Technical Review:

- Lane County developed funding and structure for three years of Waste Diversion Opportunity Grants. The follow programs were implemented with grant funding:
 - BRING Recycling and its RE:think Business program. This program, which began offering free services to businesses in early 2010, provides on-site consultation to identify money saving techniques that reduce wasteful use of resources in all operations.
 - Expanded electronics recycling services and education through NextStep Recycling, a non-profit reuse, repair and recycling organization.

- Styrofoam condenser for St. Vincent de Paul. Styrofoam is now collected at all St. Vincent de Paul staffed donation centers.
- The City of Eugene's Love Food Not Waste program. Started in 2011, this program successfully targets the large quantities of commercially generated food waste for composting. The licensed hauler fee structure was changed to allow lower rates to reflect lower tip fees for food waste collection. Springfield followed shortly after in response to the franchised hauler's request.
- Carpet Recycling pilot collection in partnership with St. Vincent de Paul (2012). St. Vincent de Paul hauls carpet to a recycler in Beaverton, Oregon and bales carpet padding for existing markets with a grant-funded baler.
- Lane County began providing a semi-annual newsletter promoting and identifying waste reduction options to all self-haul customers in 2011.

FINDINGS AND RECOMMENDATIONS

This section of the technical review report identifies key findings of the data analysis and provides recommendations for consideration to continue improvement of the recovery rate for the Lane County watershed. Programs may relate to individual City/County efforts, but are assumed to be aggregated for the purpose of calculation of watershed recovery rates.

Key Findings

Criteria were developed in order to identify programs for consideration to improve future diversion from landfill in the Lane County watershed. The criteria for developing the recommendations include the following:

- Amount of target material remaining in the landfill-disposed waste stream.
- Proven effectiveness of similar programs in similar jurisdictions elsewhere in Oregon and the western U.S.
- Ability to be implemented within the next 5 -10 years.

Target Materials

Based on the results of the DEQ 2009/2010 Waste Composition Study for Lane County, the top two categories of materials still disposed in the landfill are:

1. Organics for Composting - 23.67% -- 53,660 tons landfilled in 2009:
 - Food Scraps (17.85% -- 40,695 tons)
 - Yard Debris (5.82% -- 12,965 tons)

2. Construction & Demolition (C&D) Debris (ranging from 17.02% - 33.06%):

The lower range reflects the diversion potential of readily recyclable materials that are typically in the C&D debris stream and the higher range includes materials that may require additional market development.

C&D materials that are more readily reusable or recyclable (37,795 tons landfilled in 2009):

- Cardboard, Rock / Dirt / Other Inert Inorganics, Metal, Clean Wood, Concrete / Asphalt

C&D materials with more limited markets, that require ongoing market development for sustainable recycling, or that require special disposal. (25,689 tons landfilled in 2009):

- Rigid Plastic, Plastic Film, Clean Drywall, Carpet / Padding,
- Asphalt Roofing, Contaminated Wood

3. The Waste Composition Study also showed significant amounts of typical recyclables like paper, plastic, glass and metal products from residential and commercial sources that were still being landfill disposed in 2009--77,585 tons in aggregate.

Effectiveness and Implementation

Based on the data and analysis, documented program effectiveness and ability to be implemented in Lane County, the following seven (7) categories of programs are recommended:

- Tracking and Reporting
- Organics Collection
- Construction and Demolition Debris Recovery
- Dry Waste Processing and Material Recovery
- Mixed Recycling
- Promotion and Education Alternatives
- Countywide Communications and Coordination

Within each of these program categories, several specific programs are identified and evaluated for consideration by the County and cities. Please see section below.

Program Recommendations for Future Diversion Improvements

The following is a list of programs and recommendation developed by the technical review consultants as possible ways to improve future diversion from landfill in the Lane County wasteshed.

Programs that have successfully diverted increasing amounts of the target materials from landfill disposal have been implemented throughout Oregon and the western U.S. While there are many possible alternatives and approaches – programmatic, regulatory and financial, for example - this Technical Review focuses on proven programs that could potentially be implemented and/or expanded to achieve increased diversion within the next 5 – 10 years. Programs could be implemented by the County, the County and the cities, and/or by the private sector. In some cases, programs have already been implemented but could simply be expanded to other jurisdictions or in scope.

For more information about designing and implementing these types of programs and more, please see the State of California Waste Diversion Program Implementation for Local Governments at: www.calrecycle.ca.gov/LGCentral/Programs/. Program options and alternatives, case studies, tools, references and other resources are provided.

For the Lane County wasteshed, the following specific programs are recommended as having potential for increased material recovery in the next 5 – 10 years:

1. Tracking and Reporting - As previously noted, several data gaps and limitations were encountered in the course of conducting this Technical Review. Options to consider to improve data collection and analysis going forward for County planning and DEQ reporting purposes include the following:
 - County and cities to standardize tracking and reporting of tons disposed and recycled by facilities, jurisdictions and haulers.
 - County and cities to require specified reporting through business license, hauling licenses or franchising agreements.
 - County to coordinate with jurisdictions who have control over their own and their haulers reporting for the most efficient and effective methods.

2. Organics Collection

- Expand or implement residential yard debris collection in Springfield, Eugene-Springfield UGB and other cities.
- Increase participation rates in available commercial food scraps collection in Eugene and Springfield areas.
- Expand collection of food scraps with residential yard debris programs throughout the wasteshed.

3. Construction and Demolition (C&D) Debris Recovery

- County to install sorting equipment and/or manual separation at transfer station(s)/landfill for marketable C&D debris such as cardboard, clean wood and metals.
- County, cities and private material recovery facilities to provide improved promotion and rate incentives to attract source separated C&D debris and mixed C&D debris loads separated from trash or unmarketable C&D debris like insulation and treated wood, for example.
- County and cities to provide contract incentives for bidders on public construction/demolition projects to reward increased recycling or green building practices. Mechanisms include additional evaluation points in scoring bids, cost adjustments or other allowable preferences.
- County and city building permit systems to implement a C&D Deposit System. When obtaining building permits, builders / developers pay a deposit, assessed based on the type of building (commercial, residential, etc.), type of work (new construction vs. remodel), and/or square footage affected. The deposit is refunded if the builder demonstrates they brought materials generated to a “certified” C&D Recycling Facility, or demonstrate they recycled at least 50% of materials. Revenues from non-refunded deposits typically off-set staffing costs and other administrative and enforcement efforts.
- County and cities to provide incentives to contractors for aggressive recycling or green building practices such as discounted permit fees and/or tipping fees, expedited permitting or other tangible benefits. It is important that the incentive matches perceived or real obstacles/challenges faced by contractors. For example, if permits take a long time to approve, expedited permitting has been a very effective strategy to encourage more recycling and green building. If tipping fees are high, reductions for separate containers for cardboard, clean wood or metals at jobsites can work.
- County and cities to provide incentives to developers for aggressive recycling or green building practices such as allowing extra building height, space, expedited permitting or other tangible benefits if they: 1) Recycle at high levels during construction, 2) Require recycling of tenants and provide space and parallel / convenient access, 3) Use high levels of recycled content materials in construction, 4) Use “green” building techniques, or other desirable practices. It is important that the incentive matches perceived or real obstacles/challenges faced by developers.
- County and cities to require space for recycling in building codes for all new construction and non-trivial remodeling for commercial and multi-family buildings.
- County and cities to use a portion of revenues from building permit fees to help fund programs to divert or manage C&D debris. County, cities and private material recovery facilities to provide enhanced education and outreach to the building community.
- Eugene and Springfield to enact diversion ordinances for C&D debris. Requiring certain percentages of landfill diversion by size and type of construction or demolition project, or mandating sorting of C&D debris prior to disposal at transfer stations/landfill would boost material recovery.

4. Dry Waste Processing and Material Recovery

- County and cities to require sorting for material recovery of all dry waste (non-putrescible waste) from drop boxes and compactors received at one or more County facilities prior to landfill disposal. Only wet waste from self-haulers, licensed collection operations for

municipal solid waste, and post-sorting recovery operations could be dumped at the pit at the Glenwood Transfer Station and Short Mountain Landfill. Options include:

- The County could install manual and/or mechanical sorting equipment at Glenwood Transfer Station.
- The County could partner with private material recovery facilities (MRFs) which have the capacity to separate dry waste from recoverable materials.
- Separate drop boxes could be provided at all but two² of the County disposal sites for the collection of dry waste. These dry waste boxes would be delivered to a County or licensed private MRF for material recovery.
- County or private companies to increase current tipping fee to recapture revenue lost to diversion and add disincentive to disposal.
- County and cities to enact diversion ordinances mandating sorting of specified dry waste for material recovery prior to disposal for landfill.
- County, cities and private material recovery facilities to provide enhanced education and outreach to self-haulers, licensed haulers and the building community.

5. Mixed Recycling

- County, cities and licensed/franchised haulers to continue/expand promotion for residential mixed recycling collection.
- County, cities and licensed/franchised haulers to develop and provide targeted resources for multi-family mixed recycling collection such as distribution of recycle tote bags and door-to-door promotion, for example.
- Similar to Springfield's existing requirements for rental properties, local governments to encourage or require property managers to incorporate recycling at all properties and include recycling requirements in tenant leases.
- County, cities and licensed/franchised haulers to continue ongoing evaluation of collection service efficiencies and improvements for increased recycling and lower costs such as larger containers, less frequent collection, automation and financial incentives. For example, whenever a franchise comes up for renewal, look at whether the rates/profits reward garbage disposal or recycling.
- County, cities and licensed/franchised haulers to ensure that small business recycling services and rates are comparable to residential garbage and recycling services where the same amount and type of materials are generated, where cans/carts are used (not dumpsters or compactors), and in areas convenient to residential routes.
- Continue and expand reach of RE:think Business services offering assistance to businesses to identify waste streams and make recycling program recommendations. On-site assessments can help develop tailored recommendations to increase recycling and reduce costs. Improve tracking and reporting of achieved diversion/waste prevention.
- County and cities to require separation of designated recyclables from garbage for commercial properties and/or businesses. This is effective for high diversion only if recycling collection is also required and markets are available for the designated recyclables.
- County and cities to require commercial properties or businesses to meet recycling or diversion goals.

6. Promotion and Education Alternatives

- County, cities and licensed/franchised haulers to continue promotion through community events, school education and tours, campaigns and public outreach programs targeting one community behavior change at a time.
- County, cities and licensed/franchised haulers to continue website updates to promote programs and educate residents and businesses.

7. Countywide Communications and Coordination

² Glenwood and Short Mountain would be exempt.

- County to convene and facilitate periodic group meetings of Lane County jurisdictions to discuss effectiveness of current programs, future program planning, ways the County can assist other jurisdictions and ways to support hauler efforts in increased diversion programs, for example.

IV. Conclusion

A 2011 survey of Lane County citizens, conducted by the National Research Center, indicated that over 95% of Lane County citizens make the effort to recycle. The communities and populations of Lane County are dedicated and involved in reaping the benefits that waste prevention, reuse, remanufacture, and rethinking wasteful habits can bestow on business and community concerns.

The watershed's largest city is actively engaging in several efforts to increase construction and demolition recycling; using incentives in the permit system as well as outreach and advocacy. Plans to continue efforts that increase and institutionalize zero waste systems at the region's largest sport even venues will further maintain a good recovery rate for our region. The actively growing sustainable farm and urban farm movements have led to an increase in food waste recovery that is not tracked by established systems.

In the coming years we can anticipate increased organics collections and processing through new private enterprise and expansion of existing programs and facilities currently being discussed.

Lane County Waste Management intends to maintain and improve the efforts now in place that have resulted in meeting and exceeding the recovery rate goal set for our watershed for the past two years.

Sincerely,



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