



2013 Solid Waste Division Annual Report



King County

Department of
Natural Resources and Parks
Solid Waste Division

*Serving
Community*

*Protecting
Environment*

*Operating
Excellence*

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Acknowledgments

Published May 2014 by the Solid Waste Division, Department of Natural Resources and Parks, King County, Washington.

King County Executive

Dow Constantine

King County Council

Larry Phillips, Chair

Rod Dembowski

Reagan Dunn

Jane Hague

Joe McDermott

Kathy Lambert

Larry Phillips

Pete von Reichbauer

David Upthegrove

Prepared by

King County Solid Waste Division

Department of Natural Resources and Parks

201 South Jackson Street, Suite 701

Seattle, WA 98104-3855

206-477-4466 Voice

TTY Relay: 711

www.kingcounty.gov/solidwaste

Department of Natural Resources and Parks

Christie True, Director

Solid Waste Division

Pat D. McLaughlin, Division Director

Gemma Alexander, Principal Author

Dave Kallstrom, Graphic Designer

City Mayors

David Hill, Algona

Nancy Backus, Auburn

Richard Leider, Beaux Arts Village

Claudia Balducci, Bellevue

Dave Gordon, Black Diamond

Joshua Freed, Bothell

Lucy Krakowiak, Burien

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Fred Butler, Issaquah

David Baker, Kenmore

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Mary Jane Goss, Lake Forest Park

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Denis Law, Renton

Tom Vance, Sammamish

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Shari Winstead, Shoreline

Tony Grider, Skykomish

Matt Larson, Snoqualmie

Jim Haggerton, Tukwila

Bernie Talmas, Woodinville

Dicker Cahill, Yarrow Point



Cover Photo: A customer recycles an old bicycle at the new Bow Lake Recycling and Transfer Station.

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Message from Division Director Pat D. McLaughlin

The Solid Waste Division's collaboration with regional stakeholders to align our priorities and programs with the best interests of the region continued in 2013.

The division works to support equity and social justice in all of its programs and services. Responding directly to the questions and needs of all the diverse communities we serve, rather than simply translating English language materials, the *Recicla Más. Es Facilísimo* program has formed partnerships with local Hispanic media and begun working with a group of Spanish-speaking volunteer educators called Facilitadoras.

Drafted by the division in collaboration with stakeholders, an update to the Green Building Ordinance supports the goals of the King County Strategic Plan, establishing minimum requirements for capital projects, encouraging innovation, and facilitating cutting edge green building projects. In a significant step toward providing equitable access to improved public health and livable communities, the new ordinance now incorporates County affordable housing projects.

The company that contracts with the division to process landfill gas into pipeline-quality natural gas for sale to Puget Sound Energy had its highest performing year to date, generating over \$750,000 in revenue for the division. As one of many environmentally friendly uses for this fuel, Pierce County now fuels its entire transit fleet with natural gas generated at Cedar Hills.

The new Bow Lake Recycling and Transfer Station in Tukwila was completed on schedule and seven million dollars under budget, with a stellar safety record. A grand opening celebration was held in October. The newly constructed recycling area at Bow Lake is

on track to double the amount material recycled at transfer stations in the system.

New interlocal agreements (ILAs) between King County and 32 cities define the roles in the solid waste system and guarantee the tonnage and associated revenue that allows the division to operate the system through 2040. Five cities have chosen to keep the old ILA, which expires in 2028. In July, the division embarked on an extensive public process to review its *Solid Waste Transfer and Waste Management Plan*. A draft report was released in October. The division has continued to examine options for the northeast county and for service level options at the planned new Factoria Recycling and Transfer Station.

In 2014, the division will complete the Transfer Plan review. The division will analyze the new ILAs and will begin to implement any changes required. Development of the division's comprehensive outreach on environmental and solid waste issues will continue, allowing the division to continue as a leader in the solid waste and recycling industry.

I am proud to present this 2013 annual report describing the year's major achievements. I want to recognize those who made progress possible – our valued employees, customers, the County Council, our partnering cities and advisory committees, and the many businesses and organizations we work with. I am committed to ensuring that our division continues to lead by example, focus on the right things, work as a team, and get the right results.



The Bow Lake Recycling and Transfer Station.



Solid Waste Transfer and Disposal

Proper management of the region's solid waste supports each of the primary goals of the *King County Strategic Plan*, with particular emphasis on environmental sustainability and service excellence. The division operates eight urban transfer stations and two rural drop boxes dispersed throughout the county where commercial collection companies and self-haul customers bring garbage. Some transfer stations also accept recyclable materials from self-haul customers. The division also operates the only active landfill in King County – the Cedar Hills Regional Landfill (Cedar Hills) – where all municipal solid waste generated in the service area is disposed. In 2013, about 816,700 tons of solid waste was disposed at Cedar Hills and the division received over \$750,000 in revenue from the sale of landfill gas.

2013 was a year of change, saying goodbye to several dedicated employees who gave decades of exceptional service and who provided innovation and excellent stewardship of King County's solid waste transfer system and landfill. The new year brings with it new leadership and a wealth of knowledge and experience to aid in our pursuit of excellence.

Safety Improvements

Safety is of paramount importance and to that end significant advancements were realized this year. Implementation of an enhanced personal protective equipment policy and emergency evacuation drills are just a few examples. Our DART rate (Days Away, Restrictions and Transfers) continues to improve year after year and average costs for injury claims dropped from \$7,468 per



Self-haul customer unloading yard waste at Shoreline Recycling and Transfer Station.

claim in 2012 to \$5,533 per claim in 2013. We remain committed to this important aspect of our business and look forward to additional enhancement in 2014.

Operational Excellence

The division strives for continuous improvement to maximize ratepayer value. In 2013, a renewed focus on performance management was initiated. Operations staff identified key performance indicators focused on process efficiency. Examples of how this focus drove success includes equipment downtime being reduced by 50 percent and the number of under-loaded trailers from the Algona Transfer Station being reduced by 33 percent.

Landfill Improvements

Operation of the landfill requires large, expensive, specialized equipment. An emphasis on repair and renovation has extended the life of equipment at Cedar Hills. In lieu of purchasing new equipment, a collective effort between management and the workforce resulted in the rebuilding of heavy earth move equipment, saving of over \$500,000 in 2013.

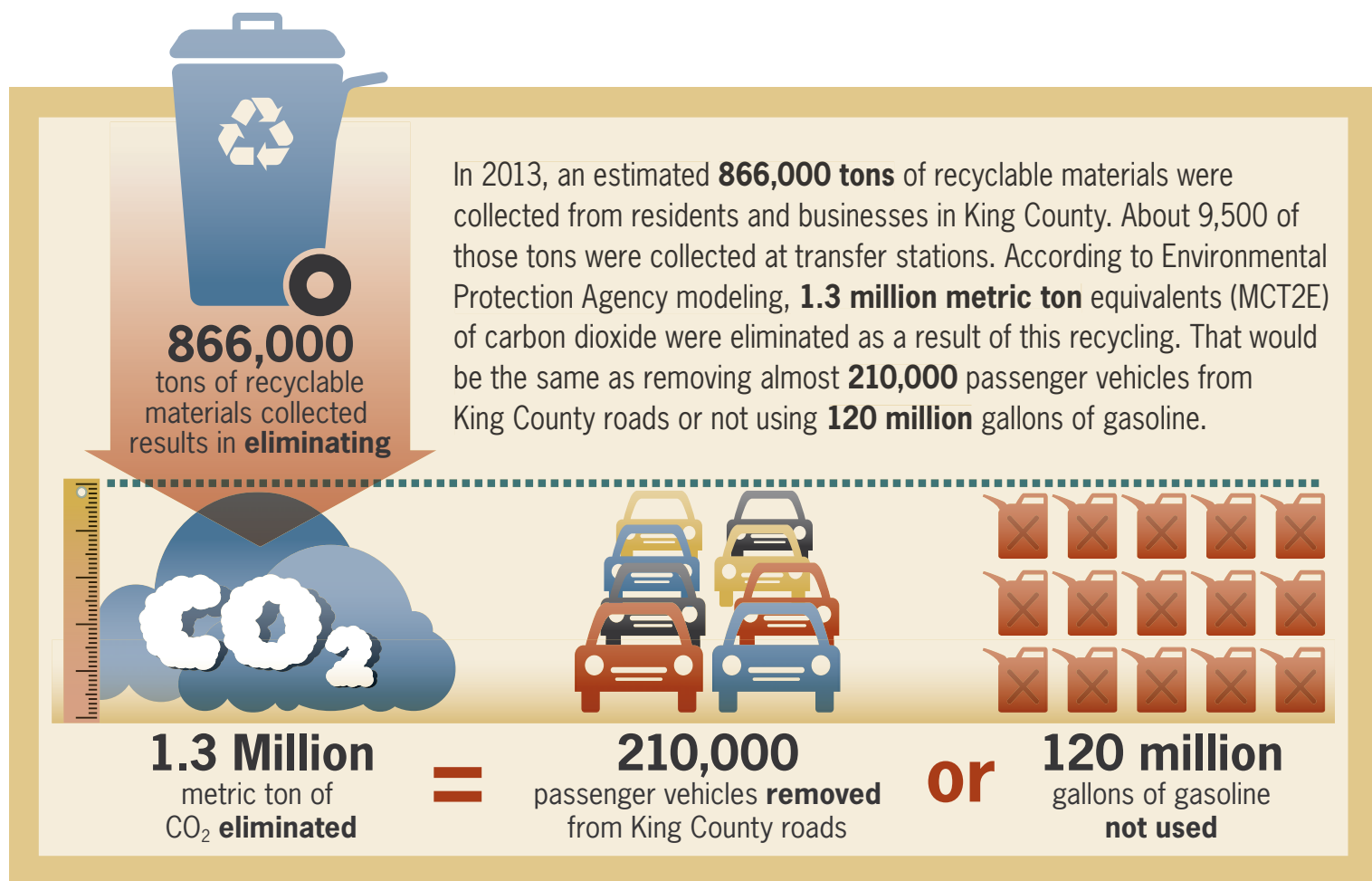
Through the application of process improvement principles, a green geo-membrane temporary cover was installed over a 5.5 acre parcel at Cedar Hills, eliminating the need to use thousands of cubic yards of soil and the application of hydro seed. This innovation not only saved about \$95,000, but also helps to extend the life of the landfill thus increasing our return on investment.

Transfer Station Improvements

The transfer system operates 362 days per year – closing only on Thanksgiving, Christmas, and New Year's Day. Operating hours at each location are determined by customer use to maximize customer convenience and operational efficiency. In 2013, transfer facilities received over 786,000 tons of garbage through nearly 710,000 customer visits. In addition to garbage, self-haul customers brought about 9,500 tons of recyclables to the transfer stations – about half of that was brought to the Shoreline Recycling and Transfer Station. The Bow Lake Recycling and Transfer Station, which opened its newly constructed recycling area in the fall, is on track to double the amount of recycling that takes place in transfer stations.

Progress on the development of a new generation of solid waste transfer facilities is described in the section *Capital Improvements*.

Waste Prevention and Recycling



The division works closely with the cities in King County to continue the region's national leadership in waste prevention, recycling, and environmental stewardship. Each year, the division responds to changes in markets, technologies, and consumer needs to develop programs that will effectively prevent the disposal of usable resources and bring the region ever closer to our Zero Waste of Resources goal. In 2013, an estimated 866,000 tons of recyclable materials were collected from residents and businesses in King County.

King County's Recycle More Campaign Completes Its Eighth Year of Outreach

The division's *Recycle More. It's Easy to Do.* campaign has completed its eighth year of recycling outreach to King County residents. The campaign has continued to work to increase the residential recycling rate throughout the county through advertising;

community events; city and retail partnerships; and outreach in Spanish to Hispanic/Latino communities.

For the past five years, the *Recycle More* campaign has leveraged outreach resources through partnerships with selected cities in King County that have residential recycling rates of less than 35 percent. A tailored approach was developed with each city. Tactics included one-on-one outreach to residents at community events and placement of articles covering a variety of recycling topics in community newspapers and city newsletters. *Recycle More* city partners in 2013 included Auburn, Black Diamond, Covington, Des Moines, Maple Valley, and Tukwila.

The division also formed promotional partnerships with local Bartell Drugs stores and BioBag, a compostable bag manufacturer, to combine television and radio advertising with in-store discounts on recycling tools. The result was a seven percent increase in sales of food-scrub containers and compostable bags compared to the same period during 2012.

Waste Prevention and Recycling

The 2013 Recycle More media campaign promoted recycling using television, radio, Facebook and on-line advertising, and continued the *One Less Bag Challenge*. This campaign to help King County's single-family households reduce their garbage asks residents to take a recycling pledge. Six hundred residents took that pledge in 2013 and received a recycling tool kit to encourage participation. At community events and small-group presentations, the division's event outreach staff and Master Recycler Composters spoke to 14,500 residents about recycling and waste reduction and passed out free samples of compostable bags and food scrap containers to encourage recycling.



Volunteer educators, called *Facilitadoras*, are the face of recycling in the Hispanic/Latino community

The division's Spanish-language outreach campaign, *Recicla más. ¡Es facilísimo!*, completed its third year in 2013. The division recruited and trained a group of volunteers to teach recycling in Spanish; they named themselves the *Facilitadoras de Reciclaje* (Facilitators of Recycling). *Recicla Más* also formed novel media partnerships with local Hispanic/Latino news media outlets using *Facilitadoras* as spokespersons. The resulting placed media was valued at 400 percent of the amount paid by the division. For the first time, the division took part in the Fiestas Patrias community event, providing recycling education to many in the Hispanic/Latino community. *Facilitadoras* made over 1,000 face-to-face contacts with the community in the last six months of the year. Finally, the division added a 'contact us' option to the *Recicla Más* website inviting the community to ask questions about recycling and garbage topics.

List of Recyclable Materials in the Region

As specified in the *Final 2001 Comprehensive Solid Waste Management Plan*, materials designated as recyclable in King County are divided into two categories – primary and secondary. Primary recyclables are materials for which there is a curbside collection program available throughout most of King County. Secondary recyclables are materials not currently collected in most curbside programs, but for which there are recycling options and markets. The table below lists the types of materials that are recyclable in King County at this time.

Primary Recyclables

- Newspaper
- Cardboard
- High-grade office paper
- Computer paper
- Polycoated paperboard
- Mixed paper (may include paper grades listed above)
- Plastic containers #1 through #7, excluding #6 expanded polystyrene
- Yard waste (including woody materials less than 3 in. in diameter)
- Food scraps and food-soiled paper
- Glass containers
- Tin cans (steel cans)
- Aluminum cans
- Ferrous and non-ferrous metals (subject to size limitations)

Secondary Recyclables

- All other single-resin plastics not included as primary recyclables
- Electronics
- Textiles
- Photographic films
- Toner/ink cartridges
- Reusable household and office goods
- Fluorescent lamps
- High-intensity halide lamps
- Plate glass
- Ceramic materials
- Appliances (white goods)
- Toilets
- Carpet and pads
- Latex paint
- Bulky yard waste
- Untreated wood
- Landclearing debris
- Stable wastes (animal manure and bedding)
- Reusable building materials

Waste Prevention and Recycling

Over the years, the number of materials that can be recycled curbside and at private facilities has continued to grow. Recycling at older transfer stations has been constrained by limited space.

Newer facilities, such as Enumclaw, Shoreline, and Bow Lake, offer a full range of recycling service, as well as accepting additional materials such as bicycles or electronics.

Facility and Address	Year Opened	Recycling and Other Services Provided
North County		
Shoreline Recycling and Transfer Station 2300 N 165th St, Shoreline 98133	2008	Standard curbside recyclables ^a , appliances, bicycles and bicycle parts, CD/DVD/VCR players, clean wood, fluorescent bulbs and tubes, scrap metal, textiles, yard waste, flags, household sharps
Northeast County		
Factoria Transfer Station 13800 SE 32nd St, Bellevue 98005	Mid-1960s	Household hazardous waste, including recycling of batteries (household, vehicle or marine), fluorescent bulbs and tubes, thermometers and thermostats, propane tanks
Houghton Transfer Station 11724 NE 60th St, Kirkland 98033	Mid-1960s	Standard curbside recyclables, textiles
Central County		
Bow Lake Recycling and Transfer Station 18800 Orillia Rd S, Tukwila 98188	2012/2013 ^b	Standard curbside recyclables, appliances, bicycles and bicycle parts, clean wood, scrap metal, yard waste, household sharps, textiles
Renton Transfer Station 3021 NE 4th St, Renton 98056	Mid-1960s	Standard curbside recyclables, textiles
South County		
Algona Transfer Station 35315 West Valley Hwy, Algona 98001	Mid-1960s	None
Rural County		
Cedar Falls Drop Box 16925 Cedar Falls Rd SE, North Bend 98045	1990	Standard curbside recyclables, textiles, yard waste
Enumclaw Recycling and Transfer Station 1650 Battersby Ave E, Enumclaw 98022	1993	Standard curbside recyclables, appliances, clean wood, reusable household goods, scrap metal, textiles, yard waste
Skykomish Drop Box 74324 NE Old Cascade Hwy, Skykomish 98288	1980	Standard curbside recyclables
Vashon Recycling and Transfer Station 18900 Westside Hwy SW, Vashon 98070	1999	Standard curbside recyclables, appliances, scrap metal, textiles, household and business generated sharps, construction and demolition debris ^c

^a Standard curbside recyclables are glass and plastic containers, tin and aluminum cans, mixed paper, newspaper, and cardboard.

^b Phase 1, the transfer building, opened July 2012. Phase 2, with expanded recycling, opened October 2013.

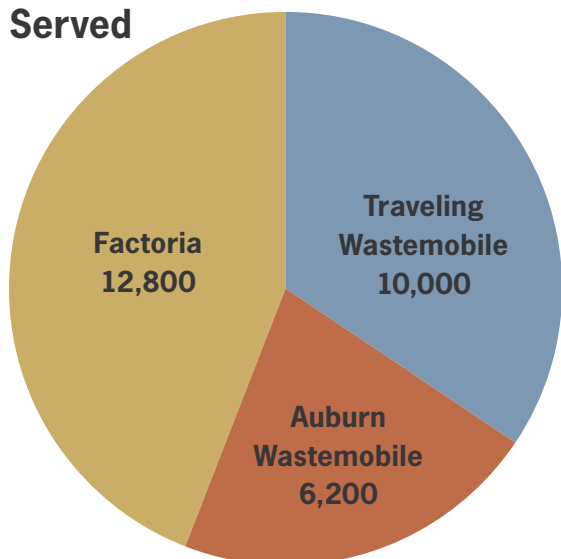
^c C&D is accepted for disposal.

Waste Prevention and Recycling

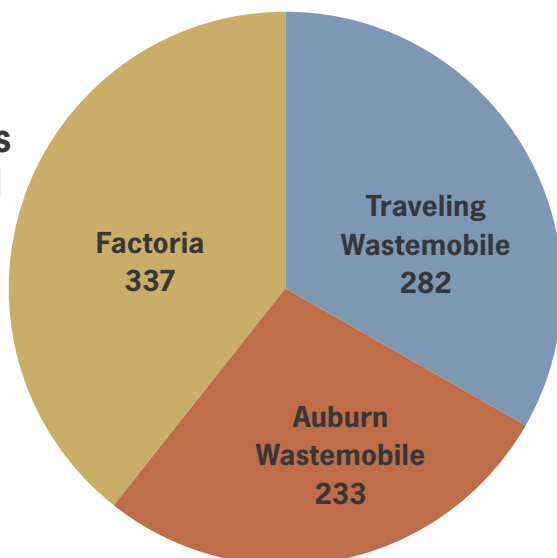
Household Hazardous Waste Services Still Popular in the Region

Created in 1989, the county's Wastemobile was the first program of its kind in the nation. Designed for the collection of household hazardous waste (HHW), it is a mobile service that travels to communities in King County, staging collection of HHW at each site for three days at a time. The Wastemobile also provides regularly scheduled HHW collection at the Outlet Collection (formerly the SuperMall) in Auburn.

HHW Customers Served



HHW Tons Collected



In 2013, the traveling Wastemobile staged 21 events that drew nearly 10,000 King County residents, collecting 282 tons of HHW. In addition, the Saturday and Sunday Auburn Wastemobile service at the Outlet Collection had 6,200 customers and collected 233 tons of HHW. The county's Factoria Transfer Station offers HHW drop-off service six days a week. In 2013, approximately 12,800 customers brought 337 tons of HHW to Factoria. The division also accepts Moderate Risk Waste (MRW) from small businesses at the Factoria transfer station and the Wastemobile. In 2013, the business collection program served over 200 small-quantity generator business customers, who brought in 16 tons of MRW.



Over 6,000 King County residents safely disposed of household hazardous waste at the Auburn Wastemobile in 2013.

Product Stewardship Efforts Continue

The terms product stewardship and extended producer responsibility are often used interchangeably. Both describe a long-term solution to managing products that are toxic or difficult to handle at the end of life. Product stewardship policies shift the financing for managing these products from ratepayers and government agencies to the product manufacturers and consumers. The manufacturers are responsible for ensuring that there is an environmentally sound system in place to collect, transport, and properly manage their products. Product manufacturers that take responsibility for their products at end of life have an incentive to design products that are more recyclable, less toxic, and more environmentally friendly.

Waste Prevention and Recycling

The division continues to chair and provide resources to the Northwest Product Stewardship Council (NWPSC). The NWPSC is a group of counties, cities, and other governmental agencies whose mission is to integrate product stewardship into the policy and economic structures of the Pacific Northwest. In 2013, the division and the NWPSC focused efforts on product stewardship policies for unwanted architectural paint, small rechargeable batteries, and unused prescription and over-the-counter medicines.

On June 20, 2013, the King County Board of Health took a significant step towards reducing preventable deaths from drug overdoses by passing a Rule & Regulation to create a drug take-back system for King County residents. The program promotes the safe disposal of unused prescription and over-the-counter medicines, and will be funded and operated by the drug manufacturers who produce the medications.

Two product stewardship bills were introduced in Washington in 2013. Senate Bill 5424/House Bill 1579, introduced at the initiative of the paint industry's American Coatings Association, would have created a collection program for the recycling or proper disposal of architectural paint in Washington state that would be similar to industry-operated paint stewardship programs in other states.

The Washington Small Rechargeable Battery Stewardship Act, introduced at the initiative of the rechargeable battery industry group Call2Recycle, would have required rechargeable battery manufacturers to fund and manage a statewide rechargeable battery recycling program for residents and businesses. These bills did not pass but remain a division priority.

Take it Back Network Thrives

The Take it Back Network is a partnership of King County area retailers, repair shops, charitable organizations, and recyclers that provides consumers with recycling opportunities for electronic and other wastes with hazardous components in a safe and cost-effective manner. The Take it Back Network recycles computers, monitors, televisions, cell phones, printers, fax machines, fluorescent bulbs and tubes, and mattresses.



Members of the network sign a commitment to recycle their products in an environmentally sound manner. The division publicizes a list of network members on its website, in brochures, and through the media.

The Take it Back Network includes 21 locations in the county that accept electronics, 69 that take fluorescent lamps, and three that accept mattresses for recycling. The table below shows the number of products that were recycled by network members in 2013.

Type of Unit	2013 Totals (number of units)
Televisions	44845
Monitors	21760
CPUs	43845
Cell Phones	10949
Other Electronics	86257
Fluorescent Bulbs	49545
Fluorescent Lamps	46062
Other Fluorescent Lamps	2566
Abandoned Materials	365
Mattresses	4966
Totals	311,160

LinkUp Program – Improving Recycling Infrastructure and Markets

LinkUp works to eliminate market barriers such as a lack of recycling



infrastructure and limited markets. In 2013, LinkUp expanded efforts to advance reuse and recycling of post-consumer textiles and agricultural markets for compost, while continuing to work on materials identified as priorities for King County – asphalt shingles, carpet, and mattresses.

Asphalt Shingles: The *Shingles in Paving* demonstration was a joint project between the LinkUp program and King County Road Services Division that completed its third year in 2013. It was a controlled experimental study of recycled asphalt shingles (RAS) in hot mix asphalt pavement conducted on a public roadway. The King County Materials Lab final report on the project stated that the demonstration pavement performed as well as traditional pavement. Based on those findings, the Materials Lab has

Waste Prevention and Recycling

recommended the expanded use of RAS on King County roadways. Local markets for hot mix asphalt containing RAS are small but growing. At the state level, 2013 saw the approval and use of the first asphalt mix design containing RAS, which met the Washington State Department of Transportation's general special provisions for that material.

Carpet: LinkUp began collaboration with Seattle Public Utilities and Zero Waste Washington to convene a coalition of diverse participants to work together to significantly increase carpet recycling throughout Washington state. The effort kicked off with a webinar titled, "What's Happening with Carpet Recycling?" The webinar had 112 participants from Washington and across the country and featured presentations covering the basics of carpet recycling, the California Carpet Stewardship Program, carpet recycling support by Flooring Association Northwest, the status of carpet recycling in Washington State, and a progress update, and ended with a lively Q&A session.

Mattresses: LinkUp continued to assist businesses and organizations to expand mattress collection infrastructure and processing capacity. In 2013, Take it Back Network mattress recycling locations grew from two to three and two new mattress processors

opened, expanding capacity from one to three processors. As three other states passed laws requiring mattress stewardship programs, LinkUp was a hub of regional information sharing, working to connect providers with potential customers, conducting outreach to local mattress retailers and manufacturers, and disseminating recycling options to consumers and local governments.

Textiles: King County residents and businesses throw away over 26,000 tons of textiles each year, including items from clothing, rags, and curtains to stuffed animals, shoes, hats, and purses. The LinkUp textiles team researched what happens to textiles after they are deposited in public drop boxes, donated at thrift stores, set out at the curb, and returned to retailers, and discovered that textile reuse and recycling markets are strong, dynamic, and growing. LinkUp also conducted an online survey to understand current behavior among King County residents related to the recycling of various types of textiles, perceptions as to what items are considered acceptable for donation, and awareness of and attitudes toward various collection options. The research results will be shared with partner agencies and used to develop a strategy to increase collection of used textiles for reuse and recycling.

Compost: To advance the large-scale use of commercial compost made from food and yard waste generated in King County, LinkUp has partnered with Washington State University to conduct 15 demonstration trials of the use of compost on five farms in King County. This project seeks to increase the use of local compost for crop production through farmer recruitment and distribution of compost for agricultural use. The ultimate goal is to stimulate demand for compost among farmers, ensuring the endurance of the local compost economy and the availability of commercial compost for agricultural use.

EcoConsumer Program Reaches Large Audiences

King County's EcoConsumer public outreach program provides information and resources to the public about recycling, waste reduction, product stewardship, toxics reduction, climate change, and more. The EcoConsumer column has been published in *The Seattle Times* for nine years, and EcoConsumer segments have run regularly on the KOMO4 TV 4 p.m. news for more than six years. The EcoConsumer program is also featured in more than 20 additional television and radio appearances every year. The EcoConsumer Twitter feed has more than 2,900 followers, up from 2,200 in 2012, and is



Mattress collection and processing infrastructure in the region is growing. Image courtesy of Spring Back Mattress Recycling NW

Waste Prevention and Recycling



The EcoConsumer program is featured in television and radio appearances.

one of the most visible and active uses of Twitter in King County government. Although it is primarily aimed at the public, the EcoConsumer Twitter account was named in 2013 as one of the top 20 “essential Twitter feeds” for solid waste industry professionals by Waste & Recycling News, a national industry magazine.

This innovative program also includes:

- The King County EcoConsumer Junk Mail Opt-Out Service, offered on the EcoConsumer website in partnership with the national organization Catalog Choice
- More than 20 public presentations every year, plus direct public assistance from the EcoConsumer project manager to several hundred members of the public
- An annual Earth Day media campaign, which in 2013 had the theme, “Earth Day Climate Challenge: Take personal actions to help reduce climate change”
- The popular annual Green Holidays campaign, which helps residents reduce their environmental impact during the consumption-heavy winter holidays. Green Holidays articles, interviews and segments were highly visible on radio, TV, online, and in print. The 2013 Green Holidays website featured well-received profiles of four King County residents, who shared fun tips on green holiday decorating, gift-giving, entertaining, food waste reduction, and recycling.

Food: Too Good to Waste

The average single-family household in King County throws away 390 pounds of food each year. Americans waste a quarter of all the food they purchase, which places the climate impacts of food production and consumption on par with transportation emissions. In fall 2013, King County launched *Food: Too Good to Waste*, a county-wide education campaign aimed at reducing the amount of residential food waste in King County. The *Food: Too Good to Waste* campaign was designed through a collaboration between the Environmental Protection Agency, King County, and more than 25 other government partners. King County piloted the campaign in 2012 with a local elementary school. In 2013, strategies included online videos that combined cooking and grocery shopping tips with food waste prevention strategies in partnership with a local grocery store; an advertising and media campaign to drive video views; and expanded web resources.



Regional School Programs Reach Youth

The division designs and coordinates programs to teach students to be good environmental stewards. Elementary, middle, and high school students learn proper methods for recycling and reuse, how to conserve resources, how to safely manage household hazardous wastes, and more. The school programs are engaging and fun for students who participate in school assemblies, workshops, role-playing exercises, and team challenges. The programs also reach out to parents and educators who help support good environmental practices in the home and the classroom. Growing participation by the region’s school districts and the enthusiasm of the students demonstrate these programs’ success.

Schools Education Program: Under the division’s countywide education program, elementary school students learn about recycling and resource conservation through assembly programs, classroom workshops, and assistance in forming Green Teams to carry out environmental projects. The current assembly show is called *Earth Challenge*. Students learn how resources are used in making everyday products and learn that reusing, recycling, and composting materials keep resources out of the landfill. Intermediate students learn that greenhouse gases are created from each step in making and disposing of a product. Schools can receive classroom presentations on topics such as waste-free choices, recycling leadership, habitat stewardship, and environmental leadership.

Waste Prevention and Recycling

Middle and high school students participate in EcoConnections classroom workshops on topics such as biodiversity, over consumption, food waste prevention, and product stewardship as they relate to waste prevention and recycling. Several of the workshops make the connection between recycling and climate change. All middle and high schools can receive assistance in forming Green Teams to carry out environmental projects.

Household Hazardous Waste School Program: There are three main audiences for the Household Hazardous Waste (HHW) School Program: teachers and their students; parents of young children; and adult English language learners (ELL).

Workshops for teachers of grades 4 through 12 provide information on HHW and ideas for incorporating HHW information into lesson plans. Teachers who take the training can request follow-up support through classroom presentations and assistance on projects with their students. In 2013, focus shifted from teacher

training to classroom presentations. Two presentations were developed to assist teachers in presenting lessons from the *Hazards on the Homefront* teacher guide.

Presentations to parents of young children focus on the effects of hazardous products on children's health and provide easy, practical steps that parents can take to protect their children. Parents learn why children and pregnant women are at special risk for the effects of household hazardous products, how to identify products of greatest concern, and how to lessen risk by using safer alternatives and properly disposing of dangerous products.

Presentations to adult ELLs provide the same information presented to other parent groups, but use many more visuals to describe the concepts. In 2013, presentations were made to 13 adult ELL groups. The most frequent native language represented was Spanish, followed in much smaller numbers by Russian, Amharic, Somali, Vietnamese, and 17 other languages.

Grand Ridge Elementary School (Issaquah) students sort recyclable and compostable materials in their school cafeteria



Waste Prevention and Recycling

King County Green Schools Program: At the end of the 2012-13 school year, 34 percent of the schools in King County were participating in the program. The three-level program provides K-12 schools and school districts with the assistance and tools they need to expand waste reduction, recycling and other conservation practices. Level One focuses on waste reduction and recycling. In addition to maintaining and expanding Level One practices, Level Two is focused on energy conservation and Level Three on water conservation. Other program areas are green building, healthy schools, litter reduction and transportation options. As of the end of the 2012-13 school year, 171 schools had completed Level One; 93 of those schools also had completed Level Two; and 54 schools had completed Level Three.

The program provides hands-on assistance, recycling containers, informational signs, student and staff trainings, recommendations about district policies to support school conservation practices, and help to plan and facilitate school and district Green Teams. Program staff share information with schools about strategies such as recycling and energy conservation that reduce greenhouse gas emissions that lead to climate change.

Activity	Number	Reach
Schools Education		
Elementary Assemblies	83	23,903 students
Elementary Classroom Workshops	177	4,607 students
Elementary Green Teams	83	3,106 students
Secondary Classroom Workshops	510	15,032 students
Secondary Green Teams	28	686 students
HHW School Program		
Classroom Presentations	74	1,897 students
Parent Presentations	12	140 adults
ELL Presentations	13	217 adults
Green Schools		
Participating Districts	12	294 schools
Individually Participating Schools	174	106,640 students



A Tahoma Middle School (Maple Valley) student helps to empty classroom recycling containers

In the 2012-13 school year

- The program assisted 12 school districts; 174 schools participating independently were located in 15 school districts and 30 cities throughout King County.
- Ninety-seven percent of participating schools achieved recycling rates of at least 40 percent or increased their recycling rates by at least 15 percent; 23 of the schools reached recycling rates of 60 percent and above.
- Seventy-three schools collected food scraps and other compostable materials to be composted at a regional facility.
- Three school districts and 46 individual schools received recognition for completing criteria towards earning a program level.

The program's website features success stories, including several schools and districts that have won state and national awards through their participation in the program.

Waste Prevention and Recycling



Members of the public compete in the Big Dig Compost Contest at a community event.

Master Recycler Composter Program

King County's Master Recycler Composter (MRC) volunteer program provides free community education about waste reduction and recycling to individuals who want to inspire others to reduce waste and recycle more. Volunteers receive free training about waste reduction, recycling, and solid waste impacts on climate change, with a primary focus on King County's *Recycle More. It's Easy to Do* campaign. In return, volunteers provide information about curbside and food scrap recycling by staffing information booths and distributing recycling tools, such as samples of compostable food scrap bags and kitchen food scrap containers, at community festivals and at farmers markets.

Recycle More. It's Easy to Do. presentations are also offered to community groups. Along with outreach staff, MRCs made 14,530 public contacts in 2013 through their outreach venues.

Best Workplaces for Waste Prevention and Recycling

Best Workplaces for Waste Prevention and Recycling is a recognition program for businesses that have successful waste prevention and recycling programs in place. To qualify, each business provides a profile describing what makes their business a Best Workplace and then offers advice and suggestions to other businesses. From practices such as donating excess edible food to food banks to offering printer toner recycling and reuse services to its customers, Best Workplaces show that making a positive impact on the environment can be good for the bottom line.



In 2013, the division named 89 local businesses to its seventh annual Best Workplaces for Waste Prevention and Recycling list, and recognized Honor Roll businesses that have made the list for five or more years in a row. For the first time, King County also honored one business from the list with the "Re-Innovator Award," recognizing exceptionally innovative waste reduction programs. The 2013 Re-Innovator award went to

Hot off the Press, a small, family-owned printing business located in Redmond.



The division's green building program supports

internal county agencies, cities, the building community, and the public in designing buildings and structures that have fewer impacts on the environment, are energy efficient, and use recycled materials. Under the umbrella of GreenTools, the division works towards sustainable cities, encourages construction and demolition recycling, improves building codes, and provides technical assistance to a variety of audiences.

Sustainable Cities Program Connects Leaders

The highlight of this year's program was the GreenTools Government Confluence (Confluence) co-sponsored by the Cascadia Green Building Council. This partnership brought regional, state, national and international leaders together to help government staff and elected officials enhance or kick start their green building initiatives. This proved to be the largest Confluence gathering to date, with 300 representatives from 31 cities, 5 counties, and 5 states plus the District of Columbia; international participants came from Canada, Germany, Mexico, and the Netherlands.

King County Executive Dow Constantine was the keynote speaker for this event, where topics ranged from rooftop gardening to resiliency impacts and sustainable transit. The Confluence gave locals access to presenters from outside the region and North America, and provided continuing education credits for architects, engineers and green building experts via the American Institute of Architects, American Planning Association, the U.S. Green Building Council and the Living Future Institute.

Over the course of 2013, the GreenTools program delivered 10 Sustainable Cities Roundtables and two technical trainings. The Sustainable Cities task force provided technical assistance to the Puget Sound Regional Council's study on "The Benefits of Green Transit Oriented Development."

Construction and Demolition Recycling Continues

GreenTools was instrumental in securing the Pacific Northwest as the venue for the Building Material Reuse Association's biennial national conference (Decon '13), held at Seattle Center from April 29 to May 1, 2013. Attended by over 175 people, the conference focused on deconstruction and salvage activities occurring in this region and around the country.

In 2013, salvage/deconstruction assessments were conducted on over 15 King County owned structures slated for removal. In addition to this work, a major focus for the year was laying groundwork for future changes in King County policies and procedures for the handling of construction and demolition materials. This involved working with the City of Seattle on the development of its new construction and demolition ordinance and helping to develop a construction and demolition materials diversion ordinance template for the region.

Green Building Ordinance Updated

The Metropolitan King County Council approved an update to the Green Building Ordinance that was drafted by the division in collaboration with stakeholders. This update includes several changes that help the County meet the long-term goals of the Strategic Plan. It establishes minimum performance requirements for energy, emissions, stormwater management, and construction and demolition materials diversion, while raising the certification goal for capital projects to *Leadership in Energy and Environmental Design* (LEED) Platinum. It also encourages innovation and



King County Executive Dow Constantine gave the keynote address for the GreenTools Government Confluence, which brought leaders together to help governments develop their green building initiatives.

Green Building

supports flexibility by allowing alternative green building rating systems, such as Built Green and Living Building Challenge. In support of countywide efforts to achieve equity and social justice, the new ordinance now incorporates King County affordable housing projects. With this ordinance, the County has taken a significant step toward providing equitable access to improved public health, air quality, and walkable communities for all of its residents.

Regional Green Building Code Development

In 2013, the GreenTools program convened the Regional Code Collaboration with the City of Seattle to continue the momentum started in 2012. The cities of Issaquah, Seattle and Shoreline were the first cities to successfully pass their code packages. GreenTools promoted development of a cutting-edge demonstration ordinance for the Living Building Challenge, which was unveiled in 2013 and included in the newly passed Green Building Ordinance.

Green Building Assistance Reaches Diverse Audiences

In 2013, GreenTools produced a green remodeling guide in Vietnamese. The piece was specifically developed to address the needs of the Vietnamese community with custom graphics and information tailored to serve this growing audience. Four thousand of these guides were distributed in 28 locations throughout King County. A Sustainable Cities Roundtable featuring Vu Lee, Director of the Vietnamese Friendship Association, supported the release of the guide.

GreenTools also provided technical assistance to two senior housing projects. The “Greenworks” project in Normandy Park is comprised of ten townhomes built in the early 1970s for seniors. The project is planning a solar array for their community center, rain gardens for the site, and whole house remodels for two of the units. The project is driven by two of the families living in the development who have encouraged their neighbors to take these efforts communitywide.

The second project will build 75 units of affordable senior housing, plus a commercial tenant space. The city-owned property is located in downtown Redmond. A workshop was held with national green building leader and universal design expert Sim Van der Ryn, and a panel of local experts. Van der Ryn is a senior himself, and brought a unique and sensitive perspective to a small group of interested industry, government and community leaders.

Helping King County Build Green

The division coordinates and staffs the countywide Green Building Team. This multi-agency team is charged with helping King County optimize green building principles in all their projects.

In 2013, King County’s green building activity consisted of seven LEED projects and 280 projects using the Sustainable Infrastructure Scorecard.

The division provided other county agencies with technical assistance on 41 projects, including eco-charrettes, research on sustainable products and materials, commissioning, specification review, analysis of green stormwater infrastructure, and assistance with building reuse and historic preservation.

The division provided technical assistance to 41 County projects in 2013.



Environmental Stewardship



The division places environmental stewardship at the forefront of all its activities in support of the *King County Strategic Climate Action Plan (SCAP)*.

The division sells landfill gas generated by the decomposition of waste buried in the Cedar Hills Regional Landfill through a contract with Bio Energy (Washington), LLC (BEW). BEW in turn refines the landfill gas into pipeline-quality natural gas and sells it to Puget Sound Energy. In 2013, BEW had its highest performing year to date. The division received over \$750,000 in revenue from the sale of landfill gas. In the summer, Pierce County began fueling its entire transit fleet with natural gas generated at Cedar Hills and processed by BEW. Only one of many environmentally friendly applications for the fuel produced by Cedar Hills, this natural gas is replacing over 3,500 gallons of diesel fuel per day.

The division also leads a number of initiatives that support the County's climate action goals. Waste prevention and recycling provide significant climate benefits by avoiding and reducing emissions associated with the mining, manufacture, and processing of new products that we all consume. Roughly one-third of what goes into the landfill is made up of compostable food scraps, food soiled paper and yard waste, which are compostable in food and yard waste carts. Composting yard and food waste minimizes methane emissions and, by applying it to the soil, sequesters carbon and reduces the demand for pesticides and fertilizers, which also require significant energy in their production.

The division partnered with Seattle Public Utilities, Cedar Grove Composting, and Waste Management to offer free and deeply discounted compost in an effort to increase awareness of the benefits of compost, increase compost sales and inform the public about the proper organic materials to place in their yard waste carts. Bulk and bag compost sales during the campaign

were very strong and significantly higher than in previous years as a result of the campaign.

Leadership in Illegal Dumping Cleanup Continues

The division continues to take a leadership role among the numerous agencies that share responsibility for handling cleanup of litter and illegal dumping in King County. Three of the division's programs deal with litter and illegal dumping: the Community Litter Cleanup Program, the Community Cleanup Assistance Program, and the Illegal Dumping Hotline.

The Community Litter Cleanup Program funds the cleanup of litter and illegal dumpsites on public lands and waterways in King County, as well as prevention and education programs. In 2013, the division spent \$37,848 in grant money from the Washington State Department of Ecology on the program, with an additional investment of over \$109,000 from the division.

In 2013, efforts focused on sensitive areas such as waterways, where dumped material can have a disproportionate effect on the environment. Crews cleaned up approximately 70 tons of debris from 155 sites. About 16 percent of the debris was recycled, including tires, appliances, scrap metal, and junk vehicles.

The Community Cleanup Assistance Program (CCAP) program is mandated by County ordinance, and it is very popular with the municipalities, county agencies, and members of the public who have received vouchers through the program. In instances of illegal dumping, investigators work with the property owner to make sure they know how to properly dispose of the material and that steps are being taken to prevent re-occurrence. The voucher recipient has 45 days to redeem the voucher at a solid waste facility. Residents in unincorporated King County and in 13 of the cities used 228 vouchers to clean up dumped waste on private property.

Environmental Stewardship

One inspector says the program “has helped the elderly, disabled, and low income families in our community to get their properties cleaned up. When I get the vouchers, I do explain to them that it will be up to them to continue to keep the property clean, but it sure does help to get the process started for people that are overwhelmed with their situations.” Victims of illegal dumping appreciate that the program removes the financial burden from the frustrating situation of having to clean up someone else’s garbage. The program also saves agencies and residents money by getting problem sites cleaned up quickly and decreasing the need for repeat inspections and costly enforcement actions.

The division also manages the Illegal Dumping Hotline, which is staffed around the clock, and maintains the database that tracks all calls and on-line complaints received. A computer application determines what jurisdiction should receive the complaint based on type and location, and sends the jurisdiction an email with the complaint information attached. In 2013, the hotline took 739 calls. Nearly all of these were reporting the location of an illegal dump site.

Record Number of Unsecured Load Fees Assessed in 2013

The division introduced two significant changes to its secured load program at solid waste facilities in 2013. Effective January 1, 2013, the fee for an unsecured load changed from a tiered fee (\$3,

\$5, or \$10 based on vehicle size) to a single fee of \$25. At the same time, a “zero tolerance” approach toward unsecured loads was instituted at all facilities. Implementation of these two changes in 2013 led to a record number of fees assessed; 4,712 customers were assessed a fee for arriving at King County solid waste facilities with unsecured loads. An updated website, a new brochure printed in both English and Spanish, additional training provided to facility employees, and advance notice of the new fees all supported the efforts to eliminate unsecured loads in 2013.

Brownfields Work Continues to Repair the Urban Environment

In 2013, the division received a new \$400,000 EPA grant to continue to promote cleanup and reuse of contaminated sites. The program uses EPA grant funds to conduct environmental site assessments and contracts to provide technical assistance to businesses, municipalities, and nonprofit organizations. In 2013, the following environmental site assessments were conducted:

- Supplemental Phase II assessment on behalf of the City of Bothell to further define a solvent plume in downtown Bothell thought to originate from the former Raincheck Cleaners. Bothell needed to identify the source of contamination to prepare a cleanup plan. The assessment found that solvent contamination on the property does not originate from the Raincheck site.
- Phase II assessment on behalf of the City of Auburn to characterize contamination and groundwater flow on a former gas station site owned by the City. The City wishes to use the property as a backwater enhancement area for Mill Creek, located directly east of the site. The assessment identified gasoline-range hydrocarbons and benzene in soil and groundwater. The benzene concentration exceeded the state cleanup level in both soil and groundwater. A preliminary cleanup cost estimate was also prepared to address the identified contamination.



Capital Improvements

The division is in the midst of a more than \$300 million modernization of its 1960s-era network of transfer stations in order to meet the needs of the residential self-haulers, businesses, and garbage collection companies who use them. Replacement or renovation at the Vashon, Enumclaw, and Shoreline transfer stations has been completed. The current plan for modernization of the 1960s-era network of transfer stations was approved in 2007. In July, the division embarked on intense collaborative work with cities and other stakeholders to review that plan to ensure that it still meets the needs of customers. This process is described in the section *Planning for the Future*.

New Bow Lake Recycling and Transfer Station

The division successfully served both commercial and self-haul customers while construction proceeded on the new Bow Lake Recycling and Transfer Station in Tukwila. Thanks to the hard work of operations staff, engineers, planners, and managers, in July 2012, solid waste transfer operations were smoothly transitioned from the old Bow Lake transfer station to the newly constructed Bow Lake Recycling and Transfer Station. Interim recycling was introduced inside the new building until the completion of a newly expanded recycling area on the south side of the building in 2013. This single station receives about one third of the

county's total garbage tonnage for transfer to the landfill, and is now on track to double the amount of recycling that takes place in transfer stations in the system.

The design of the new station incorporates many new features, including:

- A larger tipping floor with additional waste unloading areas, which will reduce customer wait times
- An enclosed building that will protect customers and workers from weather conditions, as well as contain noise, dust, and odors
- Two pre-load compactors to improve operational efficiency and decrease the number of transfer trailer truck trips required to and from the station
- Sustainable building design features, such as solar panels and energy-efficient lighting, that will result in lower life-cycle costs than conventional building design
- Environmental enhancements to the stormwater and wastewater systems

The project was completed on schedule and seven million dollars under budget, while maintaining a stellar safety record. With the completion of a new scale facility and recycling area, a grand opening celebration was held in October.

Bow Lake Recycling and Transfer Station's two pre-load compactors improve operational efficiency and decrease the number of transfer trailer truck trips.



Capital Improvements

Factoria Recycling and Transfer Station

The new Factoria Recycling and Transfer Station, slated for construction at the site of the existing facility, is progressing as scheduled. A Request for Proposals was issued for the replacement of the Factoria Transfer Station, and a negotiated procurement for construction services was begun. Construction of the new station, expected to begin in 2014, will proceed in phases, much like the Bow Lake project, to allow the old station to remain open while the new station is being built. This approach allows for uninterrupted service to customers throughout the construction period, maintaining continuity of service throughout the regional system.

Environmental Review in Process for South County Siting

After an initial siting process resulted in three potential sites for a replacement to the aging Algona Transfer Station, a public scoping meeting was held on March 27, 2013. The meeting provided an opportunity for the public to both learn about the South County Recycling and Transfer Station project and tell the division what environmental topics should be evaluated under the State Environmental Policy Act. About 100 people attended. During the public comment period, which closed in April, the division received approximately 250 comments from agencies, cities, and the public about aspects of the environment that should be studied. Environmental review began in the summer, and continued through the end of 2013.

Public Information

The division was an early adopter among government agencies in using the full spectrum of communication strategies to engage the public. The division reaches out to customers and stakeholders through social media as well as traditional communication approaches. This wide array of media avenues opens channels for learning from the public and others working in the field of solid waste, recycling, waste prevention, “green” living, and more. The division continues to lead with its efforts to reach previously underserved populations.

Among the popular social networking sites are:

- The *Recycle More. It's Easy to Do.* Facebook page, which encourages increased recycling among residents and businesses in King County through updates about division events and projects, partner city events, and general information on the environment. By December 2013, the Recycle More Facebook page had received 3,267 Likes, almost triple the number in 2012. The average reach rose from nearly 500 unique users each week to 20,373 in 2013. This sizable increase is due to paid advertising on Facebook as well as in print media that encouraged residents to increase their waste reduction and recycling practices.
- The Green Team Facebook page, which engages school-based Green Teams in King County. In any given year, the number of

teams ranges from 75 to 100. As of the end of December 2013, the Green Team Facebook page had received 58 likes, up from 47 at the end of the previous year. The average weekly reach was 40 users, which indicates high engagement from those Facebook users who “liked” the page.

- The Go, Green Team blog highlights projects by King County school-based Green Teams and provides ideas for projects, opportunities for funding, and tools for better recycling. In 2013, the blog highlighted the environmental accomplishments of individual students as well as teams of students, such as the marketing class at Global Connections High School in SeaTac. Each year this group creates global sustainability projects focused on topics such as recycling, composting, litter reduction, pesticide-free gardening, and other environmental concerns.

The division’s website continues to be a well-tapped source of solid waste information, with nearly 1.4 million unique page views in 2013. Over 75 percent of those visits were to the following sites:

- The “What Do I Do With ...?” website: Guides the user to the many vendors that accept materials for reuse, recycling, or disposal. The six most frequent searches continue to be for Appliances; Electronics; Batteries; Furniture; Landscaping/Landclearing; and Construction and Demolition Debris.

Public Information

- Transfer station and facility-related information: Includes division hours of operation, directions, and station closures, as well as daily updates on the status of facilities during major weather events.
- Garbage and Recycling site: Includes city-specific curbside hauler information, location, and driving directions to the nearest transfer facilities, contact information for each suburban city, and details about special recycling events. The site also includes environmental education topics such as *Recycle More. It's Easy To Do.*, its Spanish-language counterpart *Recicla Más*, and the *Zero Waste* website.

- The Take it Back Network: A partnership of government agencies, retailers, repair shops, charitable organizations, and recyclers that provides consumers with options for recycling certain wastes – and their hazardous components – in a safe and cost-effective manner.

The division's Customer Service Unit (CSU) fields customer inquiries that come by telephone and through the website comment form. In 2013, the team responded to more than 34,000 telephone inquiries and 1,300 website e-mail requests. The CSU assists customers with website searches to help them download brochures and access detailed information about programs. They responded to about 450 of the inquiries that came into the Illegal Dumping Hotline.

facebook

Email or Phone Password [Log In](#)

☐ Keep me logged in [Forgot your password?](#)

Recycle More. It's Easy To Do.
★★★★★ (19 ratings)
3,275 likes · 22 talking about this · 21 were here

Government Organization
The Recycle More. It's Easy to Do campaign encourages increased recycling among residents and businesses in King County, Washington.

[About](#) [Photos](#) [Likes](#) [Videos](#) [Take the Pledge!](#)

[Highlights](#)

[Recycle More. It's Easy To Do](#) [See All](#)

Planning for the Future

The current plan for modernization of the 1960s-era network of transfer stations, the *Solid Waste Transfer and Waste Management Plan* (Transfer Plan) was approved in 2007. In July 2013, the division embarked on intense collaborative work with cities and other stakeholders to review that plan to ensure that it still meets the needs of customers. A draft Transfer Plan Review Report was released in October, and remained open for public comment until February of 2014. The division has continued to examine options for the northeast county and for service level options at the planned new Factoria Recycling and Transfer Station during the comment period. In 2014, the division will transmit a final report on the review process making a recommendation for the future configuration of the transfer system. The draft *2013 Comprehensive Solid Waste Management Plan* will be updated to reflect any changes that may ultimately be made to the Transfer Plan.

The 50-year-old Algona Transfer Station has become functionally obsolete and must be closed. The county conducted an extensive analysis of alternative means of providing needed services including a site selection process. In accordance with the State Environmental Policy Act, environmental review of viable sites for replacing the Algona Transfer Station was begun in 2013. The division expects to complete environmental review in 2014.



The amended and restated interlocal agreement (ILA) was signed by King County and 32 cities, representing 92 percent of the system's tonnage. Under the new ILAs, the term of the agreement was extended for 12.5 years, through December 2040, which will keep rates lower by allowing for longer-term bonding for capital projects and maintaining the economies of scale provided by our regional system.

The division is committed to the continued exploration of emerging waste conversion technologies and advances in established disposal methods, including landfilling and incineration with energy and resource recovery. The division began a Sustainable Solid Waste Management Study that will be completed in 2014. The results of this study will help guide the division's operational and strategic planning as upcoming decisions are made that will affect the solid waste system for decades to come.

Solid Waste Projections

Projections of solid waste tonnage play an important role in planning, as fees for disposal are the division's primary source of revenue. These projections are developed using an econometric model that incorporates variables such as population, per capita income, employment, and the disposal tipping fee. In addition, efforts to increase recycling and waste prevention are considered as part of the tonnage forecast. The draft *2013 Comprehensive Solid Waste Management Plan* sets a goal of 70 percent overall recycling rate for King County by 2020. The overall recycling rate for King County in 2012 was 52 percent. While the 2013 overall rate will not be available until late 2014, the single-family residential recycling rate in 2013 was 55 percent. This is lower than the rate needed to meet long-term goals.

The Great Recession, which resulted in high unemployment, significant under-employment, lowered housing prices, and reduced consumer and business spending, also led to an overall drop in waste generation. Since 2007, tonnage disposed at Cedar Hills has dropped by about 20 percent. Decreased waste generation means that recycling tonnage has also dropped.

After the precipitous drop in 2007, tonnage continued to decrease slightly each year until 2013, when disposal at the Cedar Hills landfill increased about one percent from 2012, to about 816,700 tons. Although tonnage has begun to increase, the division does not anticipate a return to the higher tonnage levels that existed prior to 2007 for many years. Garbage tonnage is expected to remain more or less flat over the next several years. While some increase in total waste generation due to improving economic conditions is expected, it will be somewhat offset by additional recycling programs, which will divert waste from disposal.

Planning for the Future

Financial Performance

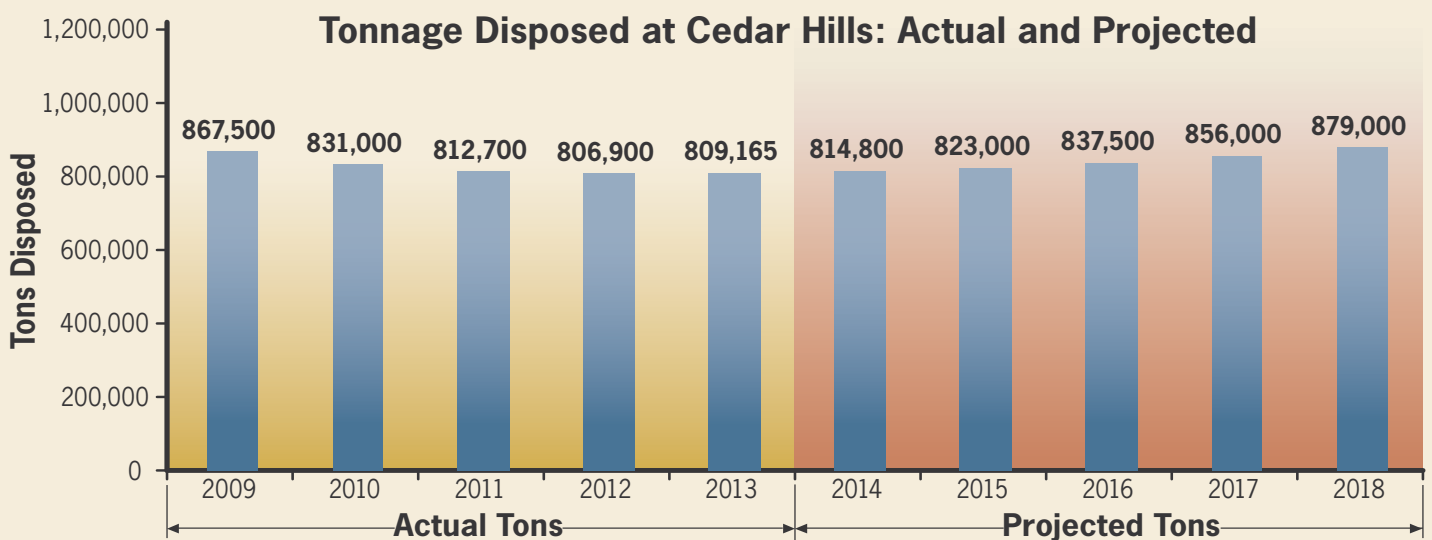
King County's solid waste transfer and disposal system is a public-sector operation that is funded almost entirely by tipping fees collected from its customers. The division is an enterprise fund, managing nearly all of its expenses with revenues earned through these fees. The fees charged at County facilities, called tipping fees, pay for the operation and maintenance of transfer and disposal facilities and equipment, education and promotion related to waste prevention and recycling, grants to cities to support waste prevention and recycling efforts, and administrative operating expenses and overhead. Tipping fees also pay for the construction of transfer facilities. Bonds or loans may be used for large projects, but repayment of this debt is funded by tipping fees.

The division was one of the first King County agencies to develop a biannual budget. The year 2013 was the first year of the division's first biannual budget. While the division works for continuous improvement in its operations to maximize ratepayer value, numerous expenses in the budget are beyond the division's control and can be difficult to predict over a long period of time – for example, diesel fuel costs. At the end of 2013, the division's operating fund was approximately six percent under budget, a healthy place to be at the midpoint of a budget cycle.

Notable areas of savings that allowed the division to remain under budget in 2013 include:

- **Debt service charges** – When the budget was developed in 2012, solid waste interlocal agreements were scheduled to expire in 2028. In 2013, new agreements extending to 2040 were signed by 32 cities. This allowed the division to sell longer-term bonds requiring lower payments. This helps to keep rates as low as possible
- **Fuel costs** – Although the division has very good data about the amount of fuel required to operate its fleet of transfer trailers and heavy equipment, the per gallon cost of that fuel can vary widely over the two year budget. In 2013, fuel costs were less than estimated, leaving the division with a slight cushion should fuel costs rise in the second year of the budget.
- **Wastewater charges** – Wastewater rates also vary over time, although to a lesser extent than fuel rates, and actual charges depend on the amount of wastewater generated. Rainfall on the landfill contributes to the volume of wastewater that must be processed. Wastewater charges are therefore higher in wet years and lower in dry years. In 2013, wastewater volumes were somewhat lower than estimated.

Overall, the division's operating fund is on track to meet its budget for the 2013-2014 budget cycle. In 2014, the division will perform a rate study for the next budget cycle.



Appendices

Note: Throughout the appendices, totals in the table may vary slightly due to rounding.

Table A-1: Total Solid Waste Tonnage Disposed, 1984- 2013

Year	Rural Landfills	Transfer Stations	Cedar Hills Reg. Direct	Cedar Hills Other Waste	Total Disposed
1984	33,649	527,522	256,459	10,512	828,142
1985	36,862	568,342	268,795	13,592	887,591
1986	39,053	624,247	272,485	22,345	958,130
1987	36,979	681,472	595,058	28,165	1,341,674
1988	38,655	667,651	556,247	39,954	1,302,507
1989	41,614	712,156	476,602	55,462	1,285,834
1990	43,097	846,422	483,950	58,105	1,431,573
1991	28,553	842,083	258,319	53,014	1,181,969
1992	23,656	769,177	119,341	21,317	933,490
1993	21,020	710,077	144,974	24,740	900,811
1994	10,288	631,274	150,400	22,423	814,385
1995	7,388	642,498	146,089	26,610	822,585
1996	7,765	595,300	190,797	23,740	817,602
1997	8,180	610,941	229,007	24,449	872,577
1998	8,229	626,871	226,618	22,004	883,722
1999	3,949	692,921	214,422	18,015	929,306
2000	-	711,565	216,169	19,440	947,174
2001	-	696,665	222,664	16,982	936,310
2002	-	683,966	238,290	17,233	939,489
2003	-	704,128	257,283	17,426	978,837
2004	-	867,917	119,110	19,136	1,006,163
2005	-	944,100	25,304	19,451	988,855
2006	-	962,407	19,331	16,468	998,207
2007	-	956,549	37,099	16,781	1,010,429
2008	-	907,678	8,802	14,137	930,616
2009	-	847,386	5,192	14,902	867,481
2010	-	811,614	5,664	13,634	830,912
2011	-	796,187	6,103	10,393	812,683
2012	-	782,056	13,087	11,772	806,915
2013	-	786,072	9,393	13,700	809,165

Table A-2: 2013 Solid Waste Tons Disposed at Transfer Facilities

Transfer Stations & Drop Boxes	Total Tons	% Self-Haul	% Commercial
Algona	139,028	24%	76%
Bow Lake	242,584	19%	81%
Cedar Falls Drop Box	3,208	100%	0%
Enumclaw	18,217	59%	41%
Factoria	117,111	19%	81%
Houghton	153,932	19%	81%
Renton	60,794	26%	74%
Shoreline	43,576	53%	47%
Skykomish Drop Box ¹	964	100%	0%
Vashon	7,622	67%	33%
Total	786,072	21%	79%

¹ Solid waste transported from Skykomish to the Houghton station; this row is not added to totals.

Table A-3: 2013 Transactions at Transfer Facilities

Transfer & Drop Box Stations	Total Transactions	% Self-Haul	% Commercial
Algona	125,995	86%	14%
Bow Lake	157,312	76%	24%
Cedar Falls Drop Box	17,419	100%	0%
Enumclaw	39,168	97%	3%
Factoria	92,644	82%	18%
Houghton	114,839	82%	18%
Renton	70,094	88%	12%
Shoreline	67,557	94%	6%
Skykomish	2,768	93%	7%
Vashon	19,459	98%	2%
Total	707,255	85%	15%

Appendices

Table A-4: 2013 Transfer Station and Drop Box Recycling Tonnage

YTD	Card-board	Mixed Paper	TAP ¹	Glass	Metal	Yard Waste	Wood	Non CFC ² Appliances	CFC Appliances	Misc. ³	Total
Bow Lake	47	9	2	0	198	1168	22	85	85	0	1614
Cedar Falls	97	96	29	71	0	276	0	0	0	0	569
Cedar Hills								1	4	2	7
Enumclaw	167	195	69	148	72	328	29	59	62	0	1129
Houghton	134	74	12	13	0	0	0	0	0	0	232
Renton	113	79	16	39	0	0	0	0	0	0	247
Shoreline	96	80	8	16	583	3530	189	160	159	0	4821
Skykomish	10	10	6	16	0	0	0	0	0	0	43
Snoqualmie	34	16	9	26	0	0	0	0	0	0	84
Vashon	29	89	105	414	68	0	0	29	25	0	760
Totals	728	649	255	743	921	5302	239	335	335	2.66	9508

¹ TAP = tin cans; aluminum cans; plastic bottles, jugs, and tubs

² Chlorofluorocarbon

³ Includes fluorescent bulbs and tubes; batteries; reusable household goods and building materials; textiles; and bicycles

Table A-5: 2001 Comprehensive Plan Targets and Results by Year

	1	2	3	4	5	6	7
Targets							
All years	18.5	23.5					
2006			50%	31.4	35%	20.8	43%
2012			52%	30.7	40%	20.3	46%
2018			53%	30.5	40%	20.1	48%
Actual Results							
2006	14.1	25.6	53%	28.0	10%	n/a	54%
2007	16.7	26.9	54%	27.7	10%	n/a	59%
2008	15.4	24.0	55%	26.1	10%	n/a	62%
2009	14.1	20.7	54%	26.4	10%	n/a	62%
2010	13.7	20.9	54%	26.0	11%	n/a	64%
2011	13.6	19.5	55%	24.8	12%	n/a	67%
2012	13.5	18.6	56%	25.0	13%	n/a	67%
2013	13.4	n/a	55%	24.9	13%	n/a	n/a

¹ Limit residential disposal to 18.5 lbs per week or less per resident (includes self-haul disposal tons).

² Limit nonresidential disposal to 23.5 lbs per week or less per employee (includes self-haul disposal tons).

³ Single family curbside recycling rate (self-haul tons not included)

⁴ Single family lbs disposed per week per household (self-haul disposal not included)

⁵ Multifamily recycling rate (self-haul tons not included)

⁶ Multifamily lbs disposed per week per household (self-haul tons not included)

⁷ Nonresidential recycling rate (self-haul tons not included)

Appendices

Table A-6: 2013 Single Family & Multifamily Recycling and Disposal Rates

Jurisdiction	Single Family		Multi-Family Recycling Rate
	Recycling Rate	Pounds Disposed per household per week	
Algona	37%	27	0%
Auburn	51%	23	16%
Beaux Arts	61%	25	No MF
Bellevue	65%	23	18%
Black Diamond	49%	30	22%
Bothell	62%	25	13%
Burien	53%	26	8%
Carnation	52%	28	26%
Clyde Hill	61%	30	No MF
Covington	42%	29	8%
Des Moines	47%	27	17%
Duvall	56%	25	14%
Enumclaw	56%	26	n/a
Federal Way	52%	26	8%
Hunts Point	55%	35	No MF
Issaquah	54%	21	22%
Kenmore	53%	27	19%
Kent	53%	24	8%
Kirkland	64%	21	16%
Lake Forest Park	64%	23	19%
Maple Valley	47%	29	4%
Medina	61%	30	No MF
Mercer Island	65%	25	26%
Newcastle	52%	25	8%
Normandy Park	57%	24	11%

Continued on next page

Table A-6: Continued

North Bend	54%	27	13%
Pacific	39%	24	2%
Redmond	61%	22	15%
Renton	61%	20	11%
Sammamish	56%	27	15%
SeaTac	41%	29	7%
Shoreline	55%	23	20%
Skykomish	no curbside recycling		
Snoqualmie	54%	25	7%
Tukwila	42%	26	8%
Woodinville	52%	27	11%
Yarrow Point	59%	29	No MF
Unincorporated - North	52%	28	18%
Unincorporated - South	45%	29	8%
Unincorporated - Vashon	7%	31	14%
Countywide	55%	25	13%

These numbers are derived from tonnage and customer count data reported to the King County Solid Waste Division in monthly reports from haulers. Reported tonnage has been adjusted to remove estimated quantities of non-recyclable materials placed in recycling and organic carts. Based on 2011-2012 sampling, recycling contaminants are estimated at 11.2% (northern County) to 12% (southern County), and organics contaminants at 2.1%.

Appendices

Table A7: Number of Telephone Inquiries by Type in 2012

Appliance Recycling	1,004
Bow Lake Renovation	40
Complaints	104
Compliments	3
Computer/Electronics Recycling	244
Construction/Demolition/Landclearing	1,798
Curbside Recycling	155
Directions to Facilities	2,011
Factoria Replacement Project	14
Furniture	1,239
General/Other Inquiries ¹	3,086
General Recycling	1,312
Hazardous Waste/Wastemobile	1,318
Houghton Roof Project	10
Hours of Operation	4,100
Illegal Dumping	448
Junk Vehicles	63
Latex Paint Disposal Policy	470
Metal	752
Transfers and Wrong Numbers	710
Residential/Business Garbage Issues	1,278
Special Collection Events	196
Special Waste	430
Television	370
Transfer Stations	12,110
Transfer Station Recycling Changes	111
Yard Waste	1,178
Total	34,554

¹ Other inquiries include solicitations, calls about Christmas trees, personal items left at transfer stations, opening charge accounts, Secure Your Load, and other division programs.

Table A-8: Solid Waste Division Legislation Summary for 2013

Short Name	Short Description	Approved by Council
Factoria Recycling and Transfer Station	Ordinance 17618: An ordinance approving the Final Evaluation Criteria for the new Factoria Recycling and Transfer Station	7/8/2013
Interlocal Agreements	Ordinance 17677: New interlocal agreements between King County and participating cities define the roles in the solid waste system and guarantee the tonnage and associated revenue that allows the division to operate the system through 2040.	10/21/2013
Budget Proviso P1	Motion 13997 P1: Motion and report describing SWAC's accomplishments for 2011 and 2012 and its work plan and goals for 2013 and 2014 and describing analysis of strategies and options for waste disposal after Cedar Hills closes	11/4/2013
Green Building Ordinance	Ordinance 17709: An ordinance renewing and enhancing green building and sustainable development policy.	12/9/2013
Amended and Restated Interlocal Agreement Amendment - City of Bothell	Ordinance 17721: amending the Amended and Restated Interlocal Agreement with the City of Bothell to allow municipal solid waste collected from future city annexation areas in Snohomish County to remain in Snohomish County's solid waste system.	12/16/2013
Name	Description	Transmitted to Council
SWD Annual Report	Solid Waste Division Annual Report as required by KCC 10.14.080 - RPT0057	5/1/2013
Capital Improvement Plan Reallocation Report	Report required by KCC 4.04.275 - RPT0067	5/17/2013
ER1 Expenditure Restriction	\$100,000 shall not be spent until transmittal of a report listing the ILAs approved by cities is transmitted - RPT0121	7/11/2013
Factoria - \$750,000 Expenditure Restriction	Draft Report to Stakeholders and King County Council	10/09/2013

Appendices

Chart A-1: Solid Waste Division Actual Revenues and Expenditures Year ending 12/31/2013

Manager / Administration

Waste Prevention & Recycling and Mod. Risk Waste	<ul style="list-style-type: none"> • Education • Technical and financial assistance • Collection services 	Expenditure \$9,614,845 28 FTEs
Landfill Operations	<ul style="list-style-type: none"> • Operate and maintain active and closed landfills • Equipment replacement transfer • Landfill rent 	Expenditure \$29,842,850 48 FTEs
Transfer Station Operations	<ul style="list-style-type: none"> • Collect fees • Monitor waste • Equipment replacement transfer 	Expenditure \$12,739,756 91 FTEs
Transportation Operations	<ul style="list-style-type: none"> • Transport garbage to landfill • Haul leachate & maintenance material • Equipment replacement transfer 	Expenditure \$9,953,654 62 FTEs
Maintenance Operations	<ul style="list-style-type: none"> • Maintain facilities and equipment • Procure and control inventory 	Expenditure \$8,963,346 62 FTEs
Operations Administration	<ul style="list-style-type: none"> • Maintenance planning for operations functions 	Expenditure \$1,216,186 8 FTEs
Capital Facilities¹	<ul style="list-style-type: none"> • Plan and execute capital projects • Environmental monitoring • Operations support 	Expenditure \$4,985,376 39 FTEs
Debt Service		Expenditure \$6,963,964 0 FTEs
Administration & Fiscal Services	<ul style="list-style-type: none"> • Manage fiscal functions • Administer customer service • Personnel functions • Payroll • Planning • Communication 	Expenditure \$14,380,166 44 FTEs

¹ Operating portion only of capital facilities budget; does not include debt-financed design/construction costs.

Summary of 2013 Unaudited Actual Activities (as of February 20, 2014)

2013 Total revenues	\$103,491,222
2013 Total operating expenditures	\$98,660,144
2013 Total employees	382

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2013 Solid Waste Division **Annual Report**



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