



2010
Solid Waste Division
Annual Report



King County

Department of
Natural Resources and Parks
Solid Waste Division



Acknowledgments

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King County Executive

Dow Constantine

King County Council

Bob Ferguson
Larry Gossett, Chair
Jane Hague, Vice Chair
Kathy Lambert
Julia Patterson
Larry Phillips
Pete von Reichbauer
Joe McDermott
Reagan Dunn

Prepared by

King County Solid Waste Division
Department of Natural Resources and Parks
201 South Jackson Street, Suite 701
Seattle, WA 98104-3855
(206) 296-6542 Voice
TTY Relay: 711
www.kingcounty.gov/solidwaste

Department of Natural Resources and Parks

Christie True, Director

Solid Waste Division

Kevin Kiernan, Division Director
Terri Hansen, Assistant Division Director
Gemma Alexander, Principal Author
Dave Kallstrom, Graphic Designer

City Mayors

David Hill, Algona
Pete Lewis, Auburn
Richard Leider, Beaux Arts Village
Don Davidson, Bellevue
Rebecca Olness, Black Diamond
Mark Lamb, Bothell
Joan McGilton, Burien
Lee Grumman, Carnation
George Martin, Clyde Hill
Margaret Harto, Covington
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Ava Frisinger, Issaquah
David Baker, Kenmore
Suzette Cooke, Kent
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Dave Hutchinson, Lake Forest Park
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Jim Pearman, Mercer Island
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George Hadley, Normandy Park
Kenneth G. Hearing, North Bend
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John Marchione, Redmond
Denis Law, Renton
Don Gerend, Sammamish
Terry Anderson, SeaTac
Keith McGlashan, Shoreline
Fred Black, Skykomish
Matt Larson, Snoqualmie
Jim Haggerton, Tukwila
Chuck Price, Woodinville
David Cooper, Yarrow Point



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Letter from the Division Director

In 2010, the division's focus shifted from planning to implementation. While the division continued to plan for the future development of the Cedar Hills Regional Landfill and implementation of an approved capital improvement program, landfill operations transitioned to the new Area 7, construction of the new Bow Lake Recycling and Transfer Station continued and mitigation and renovation at Houghton Transfer Station was completed.

The division issued a Project Program Plan, approved by Council in December, for development of Cedar Hills that will extend the life of the landfill through about 2024. The recommended development alternative was selected based on environmental review, operational feasibility, cost, flexibility, and stakeholder interest. It meets the King County Strategic Plan goals for financial stewardship and environmental sustainability. In 2011, the division will develop a detailed Site Development Plan.

Construction of the new Bow Lake Transfer and Recycling Station at the site of the existing facility in Tukwila continued throughout 2010. Site work was completed, and construction of the transfer station building itself began. The division will seek Leadership in Energy and Environmental Design Gold certification. Consistent with the Strategic Plan goal of service excellence, construction at Houghton Transfer Station improved customer and employee safety, and addressed impacts of station operations on the neighborhood. Throughout both of these

construction projects, division staff continued to serve customers safely and efficiently.

Managing our solid waste operation in the midst of an economic downturn that led to an 18 percent reduction in tonnage and associated revenues since 2007 has been an ongoing challenge. The division exercised sound financial stewardship by reducing operating hours at some transfer stations, decreasing consultant use, and reducing positions and vacancies. Together, these measures have helped to assure the long-term fiscal strength of the division. Despite the challenges, we have continued to provide environmentally sustainable solid waste transfer and disposal services to residents and businesses in King County and to keep moving forward with innovative programs to encourage waste reduction and recycling. We will continue to promote prosperity in King County by looking at ways to balance cost-effectiveness with service excellence.

I am proud to report these and other major accomplishments for 2010 and to recognize those who helped make them possible – including our customers, the King County Council, our partnering cities and advisory committees, and the many business and nonprofit organizations in the region.



Kevin Kiernan,
Division Director



Site work has been completed for the new Bow Lake Recycling and Transfer Station.



Waste Prevention and Recycling

The Solid Waste Division continues to refine its waste prevention and recycling programs and services as markets, technologies, and consumer needs change. The primary goal of the division's current efforts is to prevent the disposal of usable resources through waste prevention, reuse, or recycling of materials back into the economy.

Recycling Campaign Pushes to Recycle More

The division's recycling campaign – Recycle More. It's Easy to Do. – completed its fifth year educating and encouraging residents to recycle through a variety of promotional efforts.

In 2010, the program targeted individual cities for outreach. These focus cities included Federal Way, Kenmore, Kent, Renton, SeaTac, Snoqualmie and Tukwila. These cities had a residential recycling rate, excluding organics, of less than 35 percent. The cities partnered with the division for a two year period to aggressively promote Recycle More. It's Easy to Do. messages, emphasizing organics and curbside

recyclables. The division provided support through presentations to residents, one-on-one outreach at community events, articles in community newspapers and city newsletters, a neighborhood recycling challenge, and creating printed recycling promotion materials.



The Recycle More program emphasizes organics recycling through outreach at community events.



The pumpkin squash event demonstrated the volume of food diverted from the landfill when food scraps and food-soiled paper, including pumpkin leftovers, are recycled.

Countywide components of the Recycle More campaign included advertising, media outreach and a retail partnership. As a new complement to television and radio advertising, online ads were used for the first time to deliver recycling messages, yielding 7.6 million impressions and driving considerable traffic to the campaign Web page. The Lighten Your Load Media Challenge partnership with local television station KCPQ (Q13) pitted morning show personalities against each other to see which one could most reduce his/her garbage and increase recycling. In the fall, the Auburn Fire Department helped students squash their spent jack-o-lanterns to highlight the recyclability of food scraps. The Recycle More campaign also partnered with Bartell Drugs in 2010 to provide discounted kitchen containers and compostable bags to make food and food-soiled paper recycling easier. The promotion was successful in getting recycling tools in the hands of residents.

Bag Your Bags. Bring 'em Back.



Kennydale Elementary students collected 43,000 used plastic bags for recycling in one month.

The division launched its first public awareness campaign to encourage plastic bag recycling at grocery stores with a contest at Renton's Kennydale Elementary School. Each grade competed for one month to collect the most plastic bags for recycling. The winning class was announced at an Earth Day assembly. The event was attended by Renton Mayor Denis Law and was covered on seven local TV news stations, as well as in radio and online stories, and a piece in *The Seattle Times*.



The Bag Your Bags. Bring 'em Back. campaign partnered with seven grocery retail chains to highlight collection containers in 125 stores throughout the county. The campaign encouraged plastic bag recycling, as well as the use of reusable bags. Strategies used to raise awareness of the 61,000 tons of plastic bags disposed in King County each year included radio and online ads, public service announcements, in-store events and earned media.

Best Workplaces for Recycling and Waste Reduction

The 2010 Best Workplaces for Recycling and Waste Reduction award was presented to 75 county businesses that have successful waste prevention and recycling programs in place. To receive the award, each business was asked to provide a profile of its programs (www.kingcounty.gov/solidwaste/garbage-recycling/best-workplaces.asp), describing what made their

business a Best Workplace for Recycling and Waste Reduction and offering advice to other businesses. Many of the recipients of this year's award had implemented food scrap recycling at their businesses, in addition to general waste prevention and recycling programs.

EcoConsumer Reaches Out to New Audiences

With 26 television appearances, 81 radio segments, and 26 columns in *The Seattle Times* in 2010, the county's EcoConsumer program took its environmental message directly to the public. Along with other media coverage and online articles, the EcoConsumer message reached a combined audience of about 19.1 million in 2010. The EcoConsumer's consistent presence in the local media was used to communicate ways to balance consuming with conserving, and helped to disseminate messages from the division's other campaigns as well.

In the local media, the division's EcoConsumer, Tom Watson, has discussed topics such as electronics recycling, environmentally responsible travel, backyard wildlife, green holidays, green products and services, farmer's markets, and more. In addition to its strong, consistent presence in the traditional media, the EcoConsumer program is an established leader in the use of social media to reach new audiences. The



EcoConsumer Tom Watson shows how to recycle used cooking oil live on KOMO4 News.



Waste Prevention and Recycling Programs (continued)

EcoConsumer blog ties in with the topics covered on television and radio segments, and addresses issues of seasonal and programmatic interest. The EcoConsumer Twitter feed, with over 1,250 followers, provides links to relevant news stories and announces when new content is added to any of the other media employed by the program.

In 2010, the EcoConsumer program continued to expand its audience by producing some program materials in Spanish and drawing attention to the ways that consumer issues have been addressed in other cultures and locations. Drawing on the popularity of the soccer World Cup, EcoConsumer sponsored a Green World Cup contest to identify inspiring examples of the ways that people incorporate environmentally friendly behaviors into daily life around the world. Of course, more traditional methods of outreach continued to be used, and the EcoConsumer program made in-person presentations to 34 different organized groups.

The highly publicized Green Holidays campaign offers a broad range of holiday tips on giving experiences and other types of green gifts, green entertaining and decorating, reducing and recycling food waste, and energy conservation. In 2010, a fruitcake catapult drew attention to holiday food waste, and holiday lights were collected for recycling at holiday events in Bellevue, Shoreline and Seattle.

Big Strides in Product Stewardship

Product stewardship is an overarching strategy for conserving resources and minimizing waste throughout the life cycle of a product. It encourages environmentally friendly product design, and shifts responsibility for financing and management of the product at its end of life from ratepayers and government to product producers and users.

The division has pursued product stewardship strategies for a number of commodities, including:

Mercury-containing lights: State legislation enacted in 2010 creates a convenient, statewide recycling program for mercury-containing lighting at no cost to residents. Traditional incandescent lights are scheduled to be phased off the market due to federal energy efficiency requirements. Sales of compact fluorescent lights and tubes have already more than doubled since 2006 because they save energy and money. However, fluorescent lights contain mercury that can be released when lights break in the trash. Mercury is a bioaccumulative toxin that harms the brain, liver and kidneys and causes developmental disorders in children.

Washington is only the second state in the nation to pass a producer-funded mercury lighting recycling bill. Beginning in 2013, mercury lighting products will be collected at recycling sites which may be run by local



The division and LHWMP's education efforts contribute to the growing public demand for a state-wide pharmaceuticals take-back program.



retailers, recycling centers, governments and others. The Washington State Department of Ecology will contract with a stewardship organization to operate the recycling program. Disposal of mercury-containing lights in the garbage will be prohibited.

Pharmaceuticals: To meet the growing community need and demand for take-back options for unwanted medicines, some law enforcement offices, medical clinics, pharmacies and others in Washington have started their own temporary medicine take-back programs. In 2009 and 2010, state legislation that would require pharmaceutical manufacturers to create and finance a secure, statewide medicine return program for unwanted medicines from households was introduced, but did not pass. In response to feedback from legislators that they were not hearing from their constituents about this issue, the division in partnership with the Local Hazardous Waste Management Program (LHWMP) developed a communications campaign to inform the public about the safety and environmental impacts of improperly disposed pharmaceuticals. The campaign, called Take Back Your Meds, launched a new Web site and social media campaign using Facebook and Twitter; and developed a toolkit for use by LHWMP and other supporters. Division staff also helped to get support from local governments for the bills, informed them about the progress of the bills and provided educational materials and documents.

Electronic Products: The division provides the public with the most comprehensive information about environmentally sound options for recycling electronics and fluorescent tubes and bulbs. We promote both the Take it Back Network and the E-Cycle Washington program through our Web site, brochures, and the media. Because many recyclers participate in both of these programs, their numbers are not cumulative. In 2010, the Take it Back Network collected over 278,000 individual items for recycling. In 2010, the E-Cycle Washington program collected 13.5 million pounds of electronics from King County residents, small businesses, small local governments, charitable organizations, and school districts. This figure constitutes 34 percent of the 39.5 million pounds of equipment collected across Washington State.

LinkUp Program Facilitates Development of Recycling Infrastructure

The LinkUp program works to expand markets for recyclable and reusable materials by facilitating an interactive community of businesses, public agencies, and other organizations. Each year LinkUp addresses market barriers, such as lack of recycling infrastructure and poor end-markets for the recyclable materials that are identified as priorities for King County. LinkUp activities in 2010 continued to focus on asphalt shingles, carpet and mattresses:

- **Asphalt Roofing Shingles:** LinkUp seeks to create a viable market for the nearly 40,000 tons of asphalt shingles stripped from roofs in King County that are disposed in landfills each year. Efforts focused on sharing the initial success of a 2009 study demonstrating the use of recycled asphalt shingles (RAS) in hot mix asphalt with transportation agencies and paving industry representatives, and developing the "2010 RAS Specification Guidelines" for contracting agencies wishing to specify RAS in asphalt. One-year performance results for the demonstration pavement were also favorable, and the division plans to use this material on future paving projects. LinkUp efforts helped lead the Washington State Department of Transportation and paving industry to begin writing and testing specifications for the use of RAS.



From roof to road - these asphalt shingles will be recycled into new pavement.



Waste Prevention and Recycling Programs (continued)

- **Carpet:** Working in partnership with Seattle Public Utilities and other public sector agencies, LinkUp sponsored a Carpet Recycling Work Group to develop and carry out a Northwest Carpet Recycling Strategy to achieve the following objectives: 1) establish processing capacity for used carpet in the region, and 2) support the development of end markets for carpet-derived commodities. In 2010, LinkUp developed tools to educate end-users on how to specify recycling and recycled products, and acted as a liaison helping potential recyclers fill out a regional supply chain to connect the steps from carpet to final, marketable product. This year marked the first time that LinkUp has engaged directly with the economic development sector, a step that can lead to additional fruitful projects in the future.
- **Mattresses:** A pilot project for mattress collection at a recycling event in 2009 proved to be the tipping point for mattress recycling in King County. In 2010, Washington State Correctional Industries collected 121 mattresses from residents at the division's five recycling collection events. Mattresses are disassembled to separate foam, cotton fibers, steel, and wood from each unit. Two additional private sector mattress recycling companies have begun accepting large loads of mattresses from retailers in 2010.

Green Schools

The King County Green Schools program provides King County schools (K-12, public and private) and school districts with tools and support needed to initiate and expand waste reduction and recycling practices and other conservation strategies and to involve both students and staff in environmental stewardship.

The program provides hands-on assistance to each school and district participant, as well as recycling containers and stickers. The program offers three levels, with criteria checklists in each level. Level One focuses on waste reduction and recycling, and Levels Two and Three focus on energy conservation and water conservation, respectively. In addition to the three levels, schools may also complete actions in environmental education, environmental purchasing, green building, hazardous materials management, litter reduction, and transportation options. Schools and school districts that complete the required actions in each checklist receive recognition as models of environmental stewardship. Recognition is through web site success stories, banners, certificates and press releases. By the end of 2010, one school - Scenic Hill

Elementary School in the Kent School District - had completed all three levels.

During the 2009-2010 school year:

- Seven school districts participated in the program
- 106 individual schools spread throughout 13 school districts participated
- One hundred schools (94 percent) continued with the program the entire school year
- Of those 100 schools, 75 schools achieved either program Level One, Level Two or both; a total of 46 schools completed Level One, and 31 schools achieved Level Two
- Over 80,000 students and staff from the 100 schools benefited from the program

Interest in the program has grown steadily. As the number of participating schools receiving recognition for their successes has grown, many of them receiving Earth Hero awards, more and more schools have asked to join the program.

In recent years, two exciting trends have emerged. The first is increased participation in food scrap recycling. About 40 percent of the participating schools in the 2009-2010 school year chose to compost food scraps. This trend has been facilitated by the program, which provides hands-on assistance and \$200 towards recycling containers.



Students at Scenic Hill Elementary (Kent School District), the first school to complete all three program levels, help younger students recycle in the lunchroom.

Another trend is an increase in student activity in the program. Initially, participation in the Green Schools program was primarily driven by school staff. Recently, the number of student-led Green Teams has grown. Greater student involvement expands the environmental benefits of the program, as students bring home the conservation behaviors learned at school.

The increase in student involvement may be a result of synergies between the Green Schools program and other division programs. The division's student Green Team program is popular with Green Schools program participants, many of whom also participate in the assemblies and classroom workshops offered by the division's schools education programs.

Waste Prevention and Recycling Programs

Program	Intent of Program	Results
Schools Education Program	Elementary school students learn resource conservation messages through assembly programs, classroom workshops, and assistance in forming Green Teams to carry out environmental projects.	In the 2009-2010 school year, the division presented the assembly at 51 elementary schools. Many of these schools received both the primary and intermediate versions of the assembly, so a total of 86 assemblies were presented. The assemblies reached a total of 22,123 students. The division also presented 153 classroom workshops to 3,637 students and reached an additional 480 students through a community watershed festival. The division registered 76 classrooms (totaling 2,196 students) as Green Teams.
	Middle and high school students receive classroom workshops. Green Team assistance is also offered at the middle and high school levels.	The division presented 547 workshops to 19,037 secondary students and registered 27 classrooms (totaling 946 students) as Green Teams in the 2009-2010 school year.
Household Hazardous Waste School Program	Workshops for teachers of grades 4 to 12 provide information on household hazardous waste (HHW) and how this topic can be incorporated into lesson plans for a variety of subjects. Teachers can request follow-up support through classroom presentations and assistance on projects with their students. Parents of young children also receive presentations about HHW.	In 2010, the division provided its standard HHW training to 34 teachers, responsible for 3,383 students. In addition, it provided information on teaching HHW to thirteen teachers at the Washington Science Teachers Association conference. It delivered 44 classroom presentations, reaching 1,190 students. Assistance was given to 19 teachers on projects or lessons that affected over 2,000 students. Thirteen presentations were given to 177 parents of young children. Five presentations were given to 66 adult English Language Learners and 12 instructors.
Green Schools Program	Helps schools (both public and private) and school districts to begin or expand conservation practices in: <ul style="list-style-type: none"> • Waste reduction and recycling • Litter reduction • Green building • Hazardous materials management and reduction • Environmental education • Environmental purchasing • Energy conservation • Water conservation • Transportation choices 	In 2010, the division recognized 46 schools for completing Level One of the Green Schools Program, 31 at Level Two and 1 at Level Three. Success stories can be found at: http://your.kingcounty.gov/solidwaste/greenschools/participants.asp . By the end of 2010, the division was assisting 114 schools in 7 school districts throughout King County



Waste Prevention and Recycling Programs (continued)

Program	Intent of Program	Results
Take It Back Network	Provides residents and small businesses with recycling opportunities for their electronic products and fluorescent lamps. The network is an ongoing recycling program that the division coordinates with retailers, recyclers, repair shops, and charitable organizations. The network members sign an agreement with the division obligating them to recycle the products in an environmentally sound manner. The division publicizes the network members on the Web site, in brochures, and through paid media.	There are currently 21 locations in the Take It Back Network that accept electronics and 69 options for fluorescent lamps. In 2010, network members recycled: <ul style="list-style-type: none"> • 16,658 televisions • 33,183 monitors • 43,995 computers • 3,020 cell phones • 67,554 fluorescent bulbs • 76,895 fluorescent lamps • 37,186 other electronic items
Master Recycler Composter (MRC) Program	Trains volunteers to serve as community educators about waste prevention, recycling, home composting, and alternatives to household hazardous wastes. MRCs learn practical “how-to” information to educate citizens and motivate them to action. MRCs bring information to people’s homes, workplaces, community events, neighborhoods, and schools to help King County residents make informed decisions about managing their waste.	Due to budget constraints, the MRC Volunteer training was suspended for 2010. Training will resume in 2011. About 130 previously trained volunteers remained active in the program. MRCs participated in 127 outreach events, recording more than 680 hours of outreach to more than 11,350 King County residents. Outreach venues included large-scale community events such as Issaquah Salmon Days and Kent Cornucopia, as well as smaller events that targeted the Recycle More focus cities, such as Tukwila Days and the Kenmore summer concert series. At these events, MRCs staffed general information booths to discuss pertinent issues related to solid waste management and recycling.
Household Hazardous Waste	As a part of the Local Hazardous Waste Management Program (LHWMP), the division operates the Factoria Household Hazardous Waste Drop-Off Service and coordinates the Wastemobile mobile collection program. Wastes collected at these sites are reused by other customers, recycled, or properly disposed, as appropriate. These services are funded through a surcharge on solid waste disposal and wastewater discharge. There is no direct fee to residents utilizing the service. Regular Wastemobile service is available at the Auburn SuperMall on the first and third full weekends of the month.	The Wastemobile served 10,010 customers and collected 295 tons of materials in 21 events. The twice monthly Auburn SuperMall Wastemobile service served 4,143 customers and collected 175 tons of materials. Together, both Wastemobiles served a total of 14,153 customers and collected 471 tons of materials. Overall, there was a 20% decrease in customers served from 2009. The Factoria Hazardous Waste drop-off served a total of 13,631 customers and collected 361 tons of materials in 2010. There was an 11% increase in the number of customers served from 2009. King County facilities also accepted 15 tons of hazardous waste from 189 small quantity generator businesses.

Green Building

The division's green building program – GreenTools – 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.



Sustainable Cities Program

In 2010, GreenTools delivered four technical trainings, two tours, and the GreenTools Living Future Government Confluence. On average, these events were attended by 27 attendees representing 19 cities. A survey of 33 participating King County cities revealed that the Government Confluence, co-hosted by the Cascadia Region Green Building Council, was the major highlight in programming. Among the more than 250 people attending this sold out event were elected officials from two countries, two states, and 12 cities. Presenters for the Confluence came from Ontario, New Jersey, New York and New Mexico.

The Government Confluence was also the launching ground for the new GreenTools Toolkit2. Toolkit 2 (<http://your.kingcounty.gov/solidwaste/greenbuilding/sustainable-cities.asp>) is a web-based network of tools, resources, examples and a peer-to-peer networking forum to support a municipality's role in promoting

green building. Creative event formats engaged dialog with leading local, regional and national topic experts. Roundtables and trainings were hosted in the Cities of Bellevue, Kirkland, Sammamish, SeaTac and Shoreline. A tour of the Cedar River Watershed wrapped up the event in a natural environment.

Recycling and Reuse of Construction and Demolition Materials Continues to Flourish

The GreenTools program continued its strong emphasis on increasing the diversion of construction and demolition (C&D) materials of value from landfills to higher uses. The division provided direct assistance on C&D related issues to roughly 2600 contractors and homeowners.

Salvage and deconstruction assistance, including



Fagan Hall, a 14,000 square foot dormitory at the former Cedar Hills Alcohol Treatment Facility before deconstruction.



Green Building (continued)

on-site building assessments, was provided on 18 different King County projects. One exciting project was the deconstruction of Fagan Hall, a 14,000 square foot dormitory at the former Cedar Hills Alcohol Treatment Facility. The removal of this building was a partnership between several King County agencies with the majority of the salvage and deconstruction work being done by participants in the King County YouthBuild program. In-depth salvage and deconstruction assistance was also provided on three projects not owned by King County, including the large Bothell Crossroads Project.

Green building activity by King County agencies in 2010 consisted of 11 Leadership in Energy and Environmental Design (LEED) projects, and 142 projects using the "Sustainable Infrastructure Scorecard." More than 18,000 tons of construction material was recycled from county projects. The Houghton Transfer Station, completed in January 2011, was the first pilot project to utilize the scorecard.

A number of key C&D related issues were tackled by GreenTools in 2010, including the following:

- Participated in discussions to define beneficial use
- Outlined best management practices for asbestos issues at C&D processing facilities
- Researched asbestos contamination issues of carpeting
- Re-bid the county's contract for salvage and deconstruction with contract awards going to two different companies: the ReStore and Second Use
- Coordinated with the City of Seattle to research policies that might further encourage the recovery of C&D materials for higher valued uses
- Led an interactive session on Design for Disassembly at the annual EcoBuilding Guild Symposium

Green Building Assistance Provided to the Public and Builders

The GreenTools team provides education and technical assistance through its collaboration with the Master Builders Association of King & Snohomish Counties' residential Built Green™ program. There are currently over 750 member companies in the program. Built Green™ certified 460 projects in 2010, bringing the program total to 15,000 homes. There was a shift in the

type of building certified in 2010, with an 85% increase in multifamily units for a total of 2,562 individual dwellings.

In partnership with Home Performance Washington, GreenTools added energy efficiency modules to the award-winning Eco-Cool Remodel Tool (at www.ecocoolremodel.com). New efforts for the Eco-Cool Remodel Tool also included Eco-Cribz online videos. Modeled after home design television programs, the videos demonstrate the usefulness of the Eco-Cool Remodel Tool and provide green remodeling information in an engaging format.

GreenTools also worked with the Brightwater Environmental Education and Community Center to provide green building and sustainable materials advice for public education and interpretive displays.

Tools Developed to Assist Countywide Green Building

In accordance with King County Ordinance 16147, relating to green building and sustainable development, the division coordinates and staffs the countywide Green Building Team. This multi-agency team is charged with helping countywide projects achieve the maximum possible standards of green building. In 2010, GreenTools staff developed and delivered training on the ordinance and the "Sustainable Infrastructure Scorecard," a unique tool developed to apply green building practices to infrastructure projects. The training familiarized county project managers with the ordinance requirements as well as how to utilize the scorecard. It encompassed project qualifications, documentation checklist, credit explanation, resource examples, and reporting requirements. In addition, an online training tutorial was produced for easy access and convenience to capital project managers.

Green Building Grants Provide Incentives

Since 2006, King County GreenTools has partnered with the Wastewater Treatment Division, the Water and Land Resources Division Grant Exchange Program, Seattle Public Utilities, and Built Green™ to offer green building grants to projects pursuing LEED or Built Green™ certification. Due to the economic environment this program has been put on hold.

In 2010, two LEED grants recipients completed projects exceeding their original goal of Gold certification and achieving the Platinum level - Bastyr University Student Housing and Google headquarters. The focus for Built Green™ grants shifted to green remodels in 2010, mirroring a similar shift in the construction industry. Grants were awarded to three projects. The first of these, a single-family 4-Star remodel, completed certification in 2010.

Putting the Green in Affordable Housing

Trainings were provided to King County Department of Community and Human Services (DCHS) affordable housing staff and non-profit low income housing advocates. Scholarships were provided to attend the

2010 GreenTools Government Confluence, and the Living Future Unconference. Multiple roundtable trainings throughout the year were provided for free to King County Housing and Community Development (HCD) staff. Members of GreenTools served with other county agencies on the county's Green Affordable Housing and Healthy Green Housing committees.

Other activities included:

- Provided charrette services to Habitat for Humanity on 10 homes in Renton seeking LEED for Home and Built Green™ certifications
- Created a Green Building and Remodeling brochure for seniors in partnership with the City of Shoreline
- Produced an article on social equity and green building featured in "Trim Tab" magazine with a distribution of 20,000



Bastyr University Student Housing achieved LEED Platinum.



Environmental Stewardship

The division places environmental stewardship at the forefront of all its current activities and future plans. Through its participation on the countywide Climate Team, the division continues to support the Executive's 2007 King County Climate Plan through its operations and programs, as well as participation on state and regional forums.

Division Climate Team Takes Action

The division formed a climate team in 2009 to provide leadership within the division, and to coordinate with the Department of Natural Resources and Parks (DNRP) Climate Team. While countywide plans have established a broad policy framework, the division is responsible for developing strategies that address climate change related to solid waste management. Planning for climate change requires consideration of both how our actions may affect the climate and how climate changes may affect our facilities and operations.

In 2010, the team released a report called *Responding to Climate Change* that identified and described the actions the division is currently taking to address climate change concerns. These actions are also consistent with other environmental and economic

goals. In developing the report, the team also developed a climate change resource library and database. The climate team has improved the division's ability to track climate response efforts and provide information efficiently to the department and others when requested.

To create a common understanding of current climate change efforts, the climate team provided training for members of the Solid Waste Division Leadership Team. Leadership Team members were presented with an introduction to climate science, a summary of the regional impacts of climate change, and were brought up to date on the activities of the climate team and the contents of the report.

In 2010, examples of actions the division undertook to respond to climate change include:

- *Promoting participation in the recycling program for food scraps and food-soiled paper* –The food scrap recycling collection program encourages diverting food scraps and food soiled paper from disposal to composting. Diverting these materials eliminates methane gas generation since organics are managed aerobically during composting. Compost, produced from yard waste and food scrap recycling, improves soil and plant health and sequesters carbon when applied to residential and commercial landscapes. The program includes collection infrastructure development, and education, outreach and promotion through partnerships.
- *Expanding the E-Cycle and Take-It-Back programs among private businesses and organizations to increase recycling and reuse* – The E-Cycle Washington and Take it Back Network of private businesses, organizations, and retail stores provide reuse and recycling options for electronic products and fluorescent bulbs and tubes. These products contain both toxic substances that should be handled as hazardous waste, such as lead, cadmium, and mercury; and recyclable materials, such as metals, plastics, and glass. By placing a product's end-of-life management costs up front, this program encourages private-sector savings and innovations to benefit the climate and environment. In 2010, E-Cycle Washington recycled more than 13.5 million pounds of materials from King County at no cost to residents.



- *Promoting and using green building strategies to reduce greenhouse gas emissions during construction and ongoing operations* –The division leads a countywide team and employs green building strategies in the design and construction of its new recycling and transfer facilities, all of which attempt to achieve the LEED Gold standard. The sale of landfill gas produced at Cedar Hills utilizes an otherwise wasted resource and displaces production and depletion of natural gas.
- *Greenhouse gas inventory* - The division has partnered with the City of Seattle and Puget Sound Clean Air Agency to update King County’s existing community green house gas inventory, develop a new consumption-based inventory methodology and define a new framework for assessing progress in meeting community greenhouse gas goals.

Landfill Gas Facility Begins Commercial Production

The division sells landfill gas generated by the decomposition of the waste buried in the landfill through a contract with Bio Energy (Washington), LLC (BEW). In early 2009, BEW completed major construction

on the landfill gas-to-energy plant and began to refine landfill gas into pipeline quality natural gas, which they sell to Puget Sound Energy (PSE). During the second half of 2010, BEW completed the commissioning phase of its facility. Some pipeline quality gas was sold to PSE during commissioning, which generated revenue for the division. However, production was not consistent while the plant’s processes were developed and refined. During commissioning, up to 88% of the gas generated by the landfill was being processed at the facility. Late in 2010, BEW declared that the commissioning phase was complete, and began commercial production of pipeline quality gas. The sale of landfill gas to BEW generated approximately \$400,000 for the division in 2010.

Maintenance and equipment upgrades during the commissioning phase resulted in undesirable levels of noise. The division worked with neighbors and BEW to address those issues. BEW is making equipment and operational changes to reduce the noise produced by its facility. The division continues to work with BEW and the neighbors to ensure that any ongoing or newly developing issues are communicated quickly to BEW so that they can be addressed promptly.



BEW refines landfill gas into pipeline quality natural gas, bringing revenue into the division.



Environmental Stewardship (continued)

In its contract with BEW, the division specifically retained the rights to the emissions credits associated with conversion of the landfill gas. These rights to the emissions credits have a value on the market and can be sold or traded. When the emissions credits are matched with the resource that produced them, it increases their value. PSE proposed to purchase the emissions credits from the division so that it can match the credits with the pipeline quality gas that it is already purchasing.

In 2010, the division analyzed the options for monetizing the emissions credits' value, and concluded that selling the credits to PSE is the best alternative. The division also concluded this is a unique transaction for which no direct market price comparisons are available. Both of these conclusions were confirmed by consultant studies.

The division structured its contract with PSE to share in profits that PSE gets when selling the gas with the emissions credits. The division anticipates that the sale of the rights to the emissions credits should provide in excess of \$500,000 annually. An ordinance was submitted to Council in December 2010 that would allow the executive to directly negotiate a sale for Council approval.

Division Continues Efforts to Promote Secured Loads After State Funding Cuts

In 2010, Scale Operators at King County's solid waste transfer stations distributed 4,450 Tips for Securing Loads brochures and assessed unsecured load fees on 1,975 customers who arrived at stations with unsecured loads. Across North America, over 25,000 accidents are caused each year by litter that is either purposefully dumped by motorists or that falls out of vehicles with unsecured loads. Nearly 100 of those accidents are fatal. According to the Washington State Department of Transportation, road debris causes about 350 accidents every year on state highways. Unsecured loads constitute a public health and safety risk that is entirely avoidable.

Efforts to raise awareness about the consequences of unsecured loads continued despite the elimination of funding from the Washington State Department of Ecology to pay for law enforcement emphasis patrols and advertising. The division's secured loads outreach includes a dedicated website, education and fee assessment efforts at the stations, and collaboration with other jurisdictions.

Cleanup of Illegal Dumping Remains a Division Priority

There is no single agency that is responsible for handling the cleanup of litter and illegal dumping in King County. For several years, the division has taken a leadership role coordinating among the agencies involved. Three of the division's programs deal with litter and illegal dumping. These are 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 2010, more than \$22,500 in grant money from the Washington State Department of Ecology was spent on the program, with an additional



investment of over \$107,000 from the division. This spending allowed crews to clean up approximately 98 tons of debris from 138 sites. About 17 percent of the debris was recycled – items included tires, appliances, and junk vehicles.

The Community Cleanup Assistance Program (CCAP) was implemented in 2008 to help keep our communities clear of litter and illegal dumping. Through CCAP, county and city environmental site inspectors can request vouchers for free solid waste disposal for 1) victims of illegal dumping and 2) those on a limited or fixed income who need assistance in getting their properties cleaned up. In 2010, site inspectors across the county issued almost 525 vouchers in unincorporated King County and in 13 of the suburban cities, including Bellevue, Redmond, Shoreline, Bothell, Kent, Federal Way, Renton, Covington, Des Moines, SeaTac, Burien, Sammamish and Kirkland.

The voucher program has inspired a tremendous amount of goodwill between the county and the cities and between the county and its residents. 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. And ultimately, the program saves agencies and residents money by getting problem sites taken care of quickly and decreasing the need for repeat inspections and costly enforcement actions.

The division manages the Illegal Dumping Hotline, which is staffed around the clock, and maintains the database that tracks all calls received. In 2010, the Illegal Dumping Hotline took 771 calls. Nearly all of these calls reported the location of an illegal dump site.

The division undertook an upgrade to the hotline in 2010 that added a mapping function to make the application much more versatile and efficient.

Brownfields Program Facilitates Federal Stimulus Grants for Cleanup Projects

In 2010, the King County Brownfields Program assisted several cities and nonprofit organizations to be selected to receive federal American Reinvestment and Recovery Act (ARRA) stimulus grants to clean up contaminated sites. Grants awarded include:

- \$500,000 to the city of Enumclaw to clean up a former oil distribution site that the city wants to redevelop into senior housing
- \$700,000 to the Seattle Housing Authority to clean up a former service station to be part of the High Point mixed-use residential development
- \$450,000 to the Hearthstone Home to clean up a former dry cleaner to be redeveloped into a retirement facility
- \$150,000 to SouthEast Effective Development (SEED) to clean up a former gas station and redevelop it into The Claremont mixed-use affordable housing development

In addition, the Brownfields Program continued to provide general technical assistance to businesses, municipalities, and nonprofit organizations in the county to promote assessment and cleanup of contaminated sites. New site-specific brownfields assessment projects have been identified for 2011 in Enumclaw, Bothell, Federal Way and Seattle’s International District.



Before:
 A brownfields site housed a gas station and Chubby & Tubby store.



After:
 The Claremont mixed-use affordable housing development



Capital Projects

The division continues to implement its program of facility updates, as approved by the King County Council in the 2006 *Solid Waste Transfer and Waste Management Plan*. In 2010, site preparation for the Bow Lake Transfer Station was completed and the project began to transition into building construction. Houghton Transfer Station underwent improvements to enable the division to operate the station more safely, efficiently, and with less impact to neighbors until a new facility is built. The Factoria Transfer Station is the next station scheduled for reconstruction. It is still in its early design and permitting phase, with construction expected to begin in 2012.

Houghton

Construction at Houghton Transfer Station improved customer and employee safety, and addressed impacts of station operations on the neighborhood. The existing roof was raised and strengthened to meet current codes, enabling it to support greater snow loads and allowing commercial trucks to operate more safely. A sound wall on the west property line has been constructed for the benefit of neighbors. The old sanitary sewer pump was replaced and pedestrian and frontage improvements on NE 60th from 116th Ave NE to 120th Ave NE were completed. For the duration of the project, the Houghton station remained open, serving King County Solid Waste Division Account Holders on weekdays, and open to all customers on weekends, but operating at limited capacity. Normal operations resumed early in 2011.

Bow Lake Site Work Completed

Redevelopment of the Bow Lake Recycling and Transfer Station continued throughout 2010. Site preparation work was completed, and construction of the site facilities began in November.

The Bow Lake Transfer and Recycling Station is being reconstructed at the site of the existing facility in Tukwila and on adjoining property. The new station will include expanded recycling collection; multiple scales for inbound and outbound customers; sustainable building design features to improve energy efficiency; and environmental enhancements to stormwater and wastewater systems. The division will seek Leadership in Energy and Environmental Design (LEED) Gold certification.

Throughout construction, the division has successfully managed traffic and operations to keep the existing



The roof at Houghton Transfer Station was raised in four sections.

station open to serve both commercial and self-haul customers. The division expects a smooth transition to the new station that will allow uninterrupted service to customers. The new transfer building is expected to open by mid-2012, and all construction is expected to be completed in last quarter 2013.

Factoria

A Facility Master Plan was completed for the Factoria Transfer Station in 2010, and is now moving through the county approval process. The plan calls for replacing the existing transfer station with a new recycling and transfer station at the same location while continuing to operate throughout the construction process. Design development has begun for the new facility, which will include a fully enclosed recycling and transfer building and a household hazardous waste collection facility.



A conceptual design for the new Factoria Recycling and Transfer Station.

Siting Contract

In 2010, the division began the process to procure consultant services for the siting of two new recycling and transfer stations. As approved in the 2006 *Solid Waste Transfer and Waste Management Plan*, a new Northeast County station will be sited and constructed to replace the existing Houghton station, while a new South County station will replace the current facility in Algona. The division is committed to closing or converting the Houghton and Algona stations to some other use after the siting and construction process for the new stations is complete.

Landfill Planning and Development Continue

Solid waste is disposed at the landfill in engineered cells, or refuse areas. As each refuse area fills with garbage and nears its permitted capacity, it is closed in successive stages. The currently active refuse area, Area 7, opened on June 17. There was a transition period of ten weeks during which the first layer of garbage, called a lift, was placed in Area 7. Only select loads of waste were used to build this lift; sharp or bulky items that could damage the liner were kept out. During the transition, mattresses were used as alternative daily cover against the gravel drain layer material (DLM). The mattresses act as a filter to keep sediment out of the DLM. Area 6 stopped accepting waste on August 30, and since that time, Area 7 has been used exclusively. Area 7 is the final area permitted under the current Cedar Hills Site Development Plan. However, the recently approved Project Program Plan for Cedar Hills calls for development of at least one more cell after Area 7.

The Project Program Plan for Cedar Hills will develop an additional 56.5 acres, extending the life of the landfill through about 2024. This plan was approved by Council in December of 2010. The approved development alternative was selected based on the environmental review performed in 2009, operational feasibility, cost, flexibility, and stakeholder interest. Savings to the ratepayer balance the additional cost of landfill development in this development plan. The plan also provides a balance between the benefits of extending the life of the landfill and the need to minimize impacts of landfill operations on the surrounding community. In 2011, the division will develop a detailed Site Development Plan.



Mattresses act as a filter to keep sediment out of the drain layer material in the new Area 7.



Public Information

Social media

The division takes advantage of the ever-growing array of communication tools to keep its customers informed and engaged. To traditional approaches such as brochures, fliers, telephone calls, and Web page updates, the division has added social networking tools such as blogs, Facebook, and Twitter. These media are more than just a way to get messages out – they are avenues for learning from the public and others working in the field of solid waste, recycling, waste prevention, “green” living, and more. The division is a leader among public agencies in utilizing the full array of communication strategies available to engage with its customers and stakeholders.

The division’s EcoConsumer Web site illustrates use of the many new communication tools available (at www.KCecoconsumer.com). EcoConsumer is an informational program that focuses on striking a balance between consuming and conserving. This Web site links to a wide array of informative radio and television segments, print articles, a blog that receives about 2,300 visits each month, and a Twitter feed with over 1,250 followers. Visitors to the Web site can use the blog or Twitter to exchange ideas with the division’s personal EcoConsumer, Tom Watson.

The division’s Recycle More. It’s Easy To Do. campaign also has a Facebook page at www.facebook.com/recyclemore. The page features recycling “how to” quizzes, event notices, and all manner of recycling information and promotions. This year, the division used paid advertising on Facebook to promote food scrap recycling and drive traffic to the page. During the three week campaign, the ads generated 92 million impressions, and increased the number of “Likes” on the Recycle More Facebook page by 70%. By the end of 2010, each post to this page was generating over 1000 impressions, with over 700 “Likes” for the page. Facebook users are increasingly turning to this page as a way to answer their recycling questions instead of using Google or other search engines.

Coinciding with National Remodeling Month, the Eco-Cool Tool and EcoCribz programs launched a dynamic social media campaign hosting a Blog-A-Thon. Bloggers, green building experts, city staff and Green Tools allied partners were invited to blog about the tool and new video series. Thirty-nine

bloggers participated, with dozens of posts in numerous venues, as well as newsletter stories and 3 radio interviews. The web pages for the tool and video received a 98% increase in traffic during a three month period of time as a result of the Blog-A-Thon.

The division’s Web site continues to be a well-tapped source of solid waste information, with about a half million visits to the site in 2010. About half of those visits were to the following sites:

- **The “What Do I Do With ...?” feature:** Guides the user to the many vendors that accept materials for reuse, recycling, or disposal.
- **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, such as heavy snow storms, floods, and icy conditions.
- **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 “Contact Us” Web site comment form. In 2010, the team responded to nearly 47,000 telephone inquiries and over 1,000 Web site e-mail requests. The CSU assists customers with Web site searches to help them download brochures and access detailed information about programs.



The EcoCribz video series encourages viewers to use the interactive online Eco-Cool Remodeling Tool.

2010 Solid Waste Division Awards

After an award-winning year for the Solid Waste Division in 2009 with the completion of the first new state of the art transfer station at Shoreline and the launch of an innovative green remodeling tool, 2010 found the division in a transition period. With the completion of the division's next two capital projects at Houghton in 2011 and Bow Lake in 2012, awards for these projects are expected in upcoming years. A list of awards for 2010 follows.

International

- GreenTools for Arcade Magazine
Communicators Award – Award of Excellence
Special Edition Category
International Academy of the Visual Arts
- GreenTools for Arcade Magazine
Communicators Awards – Award of Excellence
Copy/Writing Category
International Academy of the Visual Arts

Local

- GreenTools
Green Washington Government/Academic
– Runner Up
Seattle Business Magazine

Planning for the Future

In 2011, the division will release the final 2011 Comprehensive Solid Waste Management Plan for approval by the cities and the Metropolitan King County Council. The plan builds upon the division's efforts to increase waste prevention and recycling and to advance green building practices in the region and in its operations. The division will continue to refine operational practices and facility designs in ways that further reduce its carbon footprint and promote the greening of the natural and built environments.

The division will also continue to renovate and replace its aging transfer facilities according to the approved 2006 *Solid Waste Transfer and Waste Management Plan*. The new Bow Lake Recycling and Transfer Station building will be constructed in 2011. The division will begin to identify and evaluate potential sites for new transfer stations in the northeast Lake Washington area and in the south County to replace capacity once the Algona and Houghton transfer stations are closed. The division will develop a detailed site development plan for the Cedar Hills Regional Landfill and proceed with development in accordance with the selected alternative.

In 2011, the division will propose a new solid waste rate. The current rate of \$95.00 per ton was intended for the three-year period from 2008 through 2010; however, based on the economic situation facing residents and businesses of King County, the proposal for an increase was deferred for one year. As the division moves into the fourth year at the current rate, it has prepared a

new rate study to determine the tipping fee for the year 2012. A new rate for 2012 will provide the funds necessary to operate the system at the current level of service, while allowing the cities and the county time to work in partnership on long-term agreements that will keep fee increases to a minimum while allowing for essential improvements to the solid waste transfer system.

The current Interlocal Agreements (ILAs) between 37 cities (all cities in King County except Seattle and Milton) and the county will expire in 2028. As the county prepares to issue bonds to finance the renovation of the transfer system, as approved under the cooperatively developed 2006 *Solid Waste Transfer and Waste Management Plan*, ensuring adequate revenue to repay the bonds is critical. Because the ILAs require participation in the county's solid waste system, all bonds must be repaid before the expiration of the ILAs. This could be accomplished through shorter bonds that are repaid by 2028 or through longer ILAs and bonds of greater length. Because long-term bonds will not be issued until 2014, the 2012 rate is not affected by the decision on which of these courses to follow. However, the effect on rates beyond 2012 will be significant. Cities and the county are discussing potential changes to the ILAs, and expect to conclude discussions in 2011.

The division pays rent to the King County General Fund for use of the Cedar Hills property – King County, not the Solid Waste Division, owns the property. In 2003, a



Planning for the Future (continued)

private firm, Cushman & Wakefield, conducted an appraisal to determine the value of the Cedar Hills landfill for the purpose of charging the division rent for use of the property. A rent payment schedule was established that has been used in the annual budget since 2004. However, the assumptions used in the original appraisal are no longer valid. The life of the landfill has been extended from 2012 to about 2024. The amount of waste being disposed each year has not kept pace with projections, and Seattle's waste export costs, which were used as the benchmark for calculations of alternative methods of disposal, have not risen as expected. Because these significant underlying assumptions determining the rent have all changed since 2004, a new appraisal will be done in 2011. Any change in the rent resulting from the new appraisal will be incorporated into the rate after 2012.

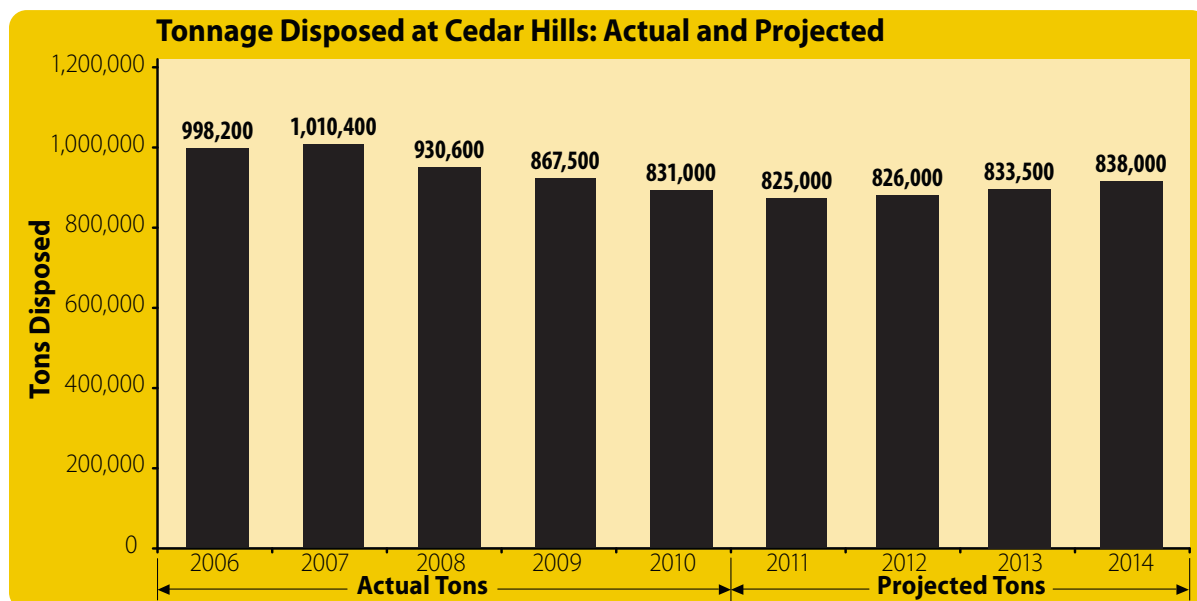
The current recession, with high unemployment, significant under-employment, lowered housing prices, and reduced consumer and business spending has led to an overall drop in waste generation. Disposal at the Cedar Hills landfill decreased about 4% from 2009, to about 831,000 tons. Since 2007 the tonnage disposed at Cedar Hills has dropped by a total of 18 percent. Decreased waste generation means that recycling amounts have also dropped.

While recent tonnage levels appear to have stabilized, the division is not expecting a return in the near future to the higher tonnage levels that existed prior to 2007. Garbage tonnage is expected to remain more or less flat over the next several years. While some increase in total generation due to improving economic conditions is expected, it will be somewhat offset by additional recycling programs, which will divert waste from disposal.

Solid Waste Projections

Projections of solid waste tonnage play an important role in planning for the future, 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. Also factored into the equation is the estimated success of future waste prevention and recycling efforts in reducing the rate of solid waste disposal. The recycling rate achieved in 2010 was about 48 percent.

The division has implemented numerous efficiencies and budget controls, including adjusting operating hours and reducing staffing in order to keep rates low for customers. Despite the challenges and pressure on the operating fund, the division has maintained its financial integrity while continuing to serve the citizens of King County and operating a transfer and disposal system that meets or exceeds the highest standards for protection of public health and the environment. In the coming years, we will continue to look at ways to balance customer needs with cost-effective services as financial conditions change.



Appendices

Note: Totals may vary slightly due to rounding.

Table A-1: 2010 Estimated Population and 2010 Housing Data

Jurisdiction	Population 2010	Single Family Units 2010	Multi Family Units 2010	Mobile Homes 2010
Unincorporated	343,340	101,787	16,238	6,599
Incorporated	1,000,570	250,848	158,727	12,226
Total	1,343,910	352,635	174,965	18,825

Sources: Office of Financial Management (OFM)
 April 1 Population of Cities, Towns, and Counties and 2010 Housing Unit Inventory by County
 Used for Allocation of Selected State Revenues

Table A-2: 2010 Single-Family (1-4 units) Curbside Collection - Service Subscribers (excludes Seattle)

Area	Curbside Garbage and Recycling	Curbside Organics
Unincorporated	77,187	33,697
Incorporated	229,788	160,979
Total	306,975	194,676

Table A-3: 2010 Single-Family (1-4 units) Curbside Collection - Average Pounds per Month (excludes Seattle)

Area	Garbage	Recycling	Organics
Unincorporated	125	51	125
Incorporated	110	57	123
Countywide	114	55	123

- Recyclables includes other curbside materials not included in Table A-4 (textiles, oil, electronics)
 - Estimated contaminants have been subtracted from recycling and organics and added to garbage.
 - Organics numbers based upon number of households subscribing to organics service, not number of households receiving garbage service
 - Countywide average is weighted by customer count

Table A-4: 2010 Single Family Curbside Recycling Tonnage

	Mixed Paper	News-Print	Card-Board	Glass	Tin & Steel	Alum.	Plastic	Organics	Total
Unincorporated	11,739	3,606	2,880	3,742	490	295	873	25,262	48,888
Incorporated	38,752	11,903	9,509	12,351	1,619	974	2,883	119,034	197,025
Total	50,491	15,508	12,389	16,093	2,110	1,269	3,756	144,296	245,913

**Table A-5: 2010 Tons Disposed at Transfer Facilities¹**

Transfer Stations & Drop Boxes	Total Tons	% Self-Haul	% Commercial
Algona	132,226	28%	72%
Bow Lake	264,984	17%	83%
Cedar Falls Drop Box	3,606	100%	0%
Enumclaw	20,719	56%	44%
Factoria	128,674	21%	79%
Houghton	144,924	16%	84%
Renton	61,220	26%	74%
Shoreline	47,237	42%	58%
Skykomish Drop Box ²	998	51%	49%
Vashon	8,025	68%	32%
Total	811,613	23%	77%

1) Tons measured on arrival at Cedar Hills

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

Table A-6: 2010 Transactions at Transfer Facilities

Transfer & Drop Box Stations	Total Transactions	% Self-Haul	% Commercial
Algona	137,339	88%	12%
Bow Lake	176,087	74%	26%
Cedar Falls Drop Box	18,743	100%	0%
Enumclaw	42,659	96%	4%
Factoria	109,811	83%	17%
Houghton	96,232	78%	22%
Renton	74,962	74%	26%
Shoreline	68,541	93%	7%
Skykomish	2,809	94%	6%
Vashon	20,765	98%	2%
Total	747,948	86%	14%

Table A-7: Total Refuse Tonnage Disposed, 1977- 2010

Year	Rural Landfills	Transfer Stations	Cedar Hills Regional Direct	Cedar Hills Other Waste	Total Disposed
1977	55,100	264,100	-	48,800	368,000
1978	56,746	320,181	-	40,668	417,595
1979	54,498	428,187	156,554	36,342	675,581
1980	54,827	460,577	218,560	35,756	769,720
1981	44,280	509,680	244,417	50,755	849,132
1982	33,890	519,931	213,715	24,943	792,479
1983	32,318	498,643	206,691	9,566	747,218
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



Table A-8: 2010 Transfer Station and Drop Box Recycling Tonnage

Origin	Organics ¹	Paper	T-A-P-G ²	Scrap Metal	Appliances/ Electronics	Wood	Misc ³	Total
Bow Lake	0	0	0	0	3	0	0	3
Cedar Falls	255	214	119	0	56	0	4	648
Cedar Hills	37	1	0	11	9	0	0	58
Enumclaw	293	475	230	52	182	0	5	1,237
Houghton	0	530	90	0	0	0	3	623
Renton	0	790	269	0	0	0	5	1,064
Shoreline	3,942	598	143	651	357	141	5	5,838
Skykomish	0	23	28	0	0	0	0	51
Snoqualmie	0	53	25	0	0	0	0	78
Vashon	0	175	516	0	56	0	3	749
Total	4,528	2,859	1,420	714	663	141	25	10,349

1 Includes yard waste, food waste and food-soiled paper

2 T-A-P-G = tin cans; aluminum cans; plastic bottles, jugs and tubs; glass bottles and jars.

3 Includes fluorescent bulbs and tubes, batteries, reusable household goods and building materials, and textiles.

Note: The Algonia and Factoria transfer stations do not have recycling bins because of space and operational constraints.

Bow Lake discontinued acceptance of materials for recycling during transfer station construction beginning in March 2009.

Table A-9: Number of Telephone Inquiries by Type in 2010

Appliance Recycling	1573
Complaints	83
Computer/Electronics Recycling	611
Construction/Demolition/Landclearing Debris	2,097
Curbside Recycling	528
Directions to Facilities	2,873
Furniture	1,125
General Recycling	1,659
Hazardous Waste/Wastemobile	1,992
Hours of Operation	6,086
Illegal Dumping	524
Junk Vehicles	98
Latex Paint Disposal Policy	578
Metal	1,011
Non-assistance Transfers and Wrong Numbers	1,372
General/Other Inquiries ¹	3,948
Residential/Business Garbage Issues	1,957
Special Collection Events	452
Special Waste	400
Televisions	703
Transfer Stations	15,794
Yard Waste	1,409
Total	46,873

1 Other general inquiries include calls about personnel, weather-related events, junk mail, school programs, composting, council contacts, accounts, publications, etc.

Table A-10: Solid Waste Division Legislation Summary for 2010		
Name	Description	Approved by Council
Houghton Transfer Station - Change in Operating Hours	Ordinance 16790 redirecting self haulers on weekdays from the Houghton Transfer Station during renovation of roof structure.	4/5/2010
Bow Lake Alternative Procurement Contract	Ordinance 16914 approving the contract for construction of the new Bow Lake Transfer Station building.	8/23/2010
2010 Budget Proviso 2: Report on Factoria Transfer Station Hours	Motion 13325 accompanied by a report evaluating Factoria Transfer Station service hours on weekdays.	9/7/2010
2010 Budget Proviso 3: Report on Implementation of Washington State Auditor's Utility Audit Recommendations	Motion 13325 accompanied by a report on the division's progress in implementing audit recommendations with which the division wholly or partially concurred.	9/16/2010
Bow Lake Recycling and Transfer Station Property Purchase	Ordinance 16933 approving property purchase for Bow Lake sewer and stormwater easement.	9/20/2010
Cedar Hills Project Program Plan	Motion 13382 approving strategies for extending the life of the landfill.	12/6/10
		Transmitted to Council
Storm Debris Policies Preliminary Report	A preliminary report on the development of storm debris management policies required by adopted Ordinance 16646.	3/11/2010
2010 Budget Proviso 1: Storm Debris Management	Coordinate with LHWMP to assure appropriate disposal methods are available for toxics-contaminated flood debris for the 2009-2010 season.	Transmitted to Council with Storm Debris Policies Final Report
Countywide Green Building Report	Countywide Green Building Annual Report, as required under KCC 2.95.	4/30/2010
Solid Waste Division Annual Report	Solid Waste Division Annual Report as required under KCC 10.14.080.	4/30/2010
Capital Improvement Plan Reallocation Report	Report required by KCC 4.04.273 requesting reallocation of existing appropriations in response to unforeseen project requirements and detailing financial plans, as authorized by the division's Capital Improvement Program flexible budgeting authority (Ordinance 14811).	4/30/2010
Environmentally Preferable Purchasing Annual Report	This annual report on environmentally preferable purchasing, required under KCC 10.16.170(c) was prepared by the division and transmitted by Procurement.	6/4/2010
Storm Debris Policies Final Report	A final report on the development of management policies required by adopted Ordinance 16646, including a summary of the actions taken to fulfill the requirements of 2010 budget proviso 1.	7/22/2010
2010 Budget Proviso 4: Report on Gas to Energy Project	A report on the efficacy of the methane gas collection and sale operations at the Cedar Hills Landfill.	9/22/2010
Overweight Transfer Trailers Report	Report studying the availability and utility of truck scales for use at solid waste transfer stations currently not served by scales.	11/10/2010



Chart A-1: Solid Waste Division Actual Revenues and Expenditures Year Ending 12/31/2010

Manager / Administration			
Waste Prevention & Recycling and Mod. Risk Waste	<ul style="list-style-type: none"> • Education • Technical and financial assistance • Collection services 	Expenditure	Revenue
		\$8,397,498 25 FTEs	Disposal fees \$5,640,624 Haz. waste \$2,551,138 Uninc. household fees \$205,735
Landfill Operations	<ul style="list-style-type: none"> • Operate and maintain active and closed landfills • Landfill and equipment Replacement transfer • Landfill rent 	Expenditure	Revenue
		\$24,036,430 50 FTEs	Disposal fees \$20,764,939 Interest \$229,924
Transfer Station Operations	<ul style="list-style-type: none"> • Collect fees • Monitor waste • Equipment replacement transfer 	Expenditure	Revenue
		\$12,498,545 97 FTEs	Disposal fees \$10,916,980
Transportation Operations	<ul style="list-style-type: none"> • Transport garbage to landfill • Haul leachate & maintenance material • Equip. replacement transfer 	Expenditure	Revenue
		\$9,659,434 69 FTEs	Disposal fees \$8,437,130
Maintenance Operations	<ul style="list-style-type: none"> • Maintain facilities and equipment • Procure and control inventory 	Expenditure	Revenue
		\$9,387,630 63 FTEs	Disposal fees \$9,387,630
Operations Administration	<ul style="list-style-type: none"> • Maintenance planning for operations functions 	Expenditure	Revenue
		\$797,174 8 FTEs	Disposal fees \$797,174
Capital Facilities¹	<ul style="list-style-type: none"> • Plan and execute capital projects • Environmental monitoring • Operations support 	Expenditure	Revenue
		\$6,634,939 38 FTEs	Disposal fees \$5,750,917 C&D fees ² \$294,176 DOE and EPA grants \$589,846
Debt Service		Expenditure	Revenue
		\$5,923,4665 0 FTEs	Disposal fees \$5,923,466
Administration & Fiscal Services	<ul style="list-style-type: none"> • Manage fiscal functions • Administer customer service • Personnel functions • Payroll • Planning • Communication 	Expenditure	Revenue
		\$13,339,062 57 FTEs	Disposal fees \$13,119,819 Interest \$219,243

¹ Operating portion only of capital facilities budget; does not include debt-financed design/construction costs.
² Supports construction and demolition debris program costs.

Summary of 2008 Actual Activities	
2010 Total revenues	\$84,828,741
Fund balance	\$5,845,437
2010 Total operating expenditures	\$90,674,178
2010 Total employees	407



This material will be provided in alternate
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King County Solid Waste Division

206-296-4466

1-800-325-6165, ext. 6-4466

TTY Relay: 711

www.kingcounty.gov/solidwaste

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Solid Waste Division