



**King County**

Department of  
Natural Resources and Parks

# 2008 Solid Waste Division **Annual Report**



*Open fields of green at the Cedar Hills  
Regional Landfill attract many species of wildlife.*

## Acknowledgments

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### Front and back cover photos:

Interim Operations Manager Dean Voelker, who oversees activity at the Cedar Hills Regional Landfill, keeps a camera close at hand during his daily rounds of the 920-acre facility. He captured these candid photographs of the black-tailed deer and coyote, just a couple of the wildlife species that live in the lush habitat surrounding the landfill.



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*Tippers empty trailers of garbage into the landfill at dusk.*

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## Letter from the Division Director

Throughout 2008 we have continued to move forward with our facility renovations approved in the *2006 Solid Waste Transfer and Waste Management System Plan*. Green building and sustainable development have been at the forefront of all design and construction work at both the transfer facilities and the Cedar Hills Regional Landfill. At the same time, the division continues to promote programs that encourage waste prevention and reuse, energy conservation, climate-friendly purchases, composting, recycling of construction and demolition materials, and other practices that reduce greenhouse gas emissions generated by residents and businesses throughout the region.

The division has received national, regional, state, and local awards for our innovative facility design and programs, not the least of which is the platinum certification for Leadership in Energy and Environmental Design™ (LEED™) for the newly built

Shoreline Recycling and Transfer Station. The highest of four possible ratings, the platinum LEED™ certification recognizes the creative and forward-looking approach taken to upgrade this transfer station, asserting the division's leadership in environmental design and sustainability. There are only 65 projects worldwide with a LEED™ platinum certification, and Shoreline is the only transfer station to achieve the highest rating. The environmental achievements attained at the Shoreline station raise the bar for other station renovations and new construction planned for the future.

A large stride in the waste prevention and recycling arena has been the tremendous success of the collection program for food scraps and food-soiled paper with the yard waste. Over the last several years, residential collection services for food scraps have been made available to more than 90 percent of King County's single-family curbside garbage customers.



Performing the ribbon cutting at the new Shoreline station are (l – r) Solid Waste Division Director Kevin Kiernan, County Executive Ron Sims, Lake Forest Park Mayor David Hutchinson, Shoreline Mayor Cindy Ryu, County Councilmember Bob Ferguson, Lake Forest Park City Councilmember Don Fiene, and Shoreline City Councilmember Janet Way.



## **Letter from the Division Director (continued)**

Food scraps make up about one-third of the wastes generated by single-family residents. The yard waste and food scraps are taken collectively to a processing facility where they are turned into nutrient-rich compost for soils and sold in local and regional markets.

The division is also in the process of updating two key planning documents important to the long-term future of solid waste management in the county. First is the update of the 2001 comprehensive solid waste management plan – the county’s road map for managing the region’s solid waste. The plan focuses on further upgrades to our transfer facilities and landfill that will keep pace with customer demands and new technologies, and builds upon our many successes in waste prevention and recycling. Second is the site development plan for the Cedar Hills Regional Landfill. The primary objective of this latter plan is to extend the life of the landfill as long as practicable to keep rates as low as possible. Success in this effort will delay the higher rate increases that will come when the landfill closes and the county transitions to a different method of solid waste disposal. As this transition approaches, we continue to monitor technological advancements in waste-to-energy and other conversion technologies.

In the meantime, the global economic downturn continues to touch every sector of society, and the Solid Waste Division is no exception. Since late 2007, we have seen significant, unanticipated reductions in garbage tons delivered to the landfill, stemming primarily from reductions in consumer spending and overall business activity in the region. While we ardently promote waste prevention, the recent drop in tonnage was much more sudden and dramatic than expected. As a result, we are monitoring this trend and adjusting expenditures as necessary to balance our activities with our revenues. Our overall goal is to continue to refine our solid waste system, operations, and programs while providing the highest quality public service in a fiscally responsible manner.

I am proud to highlight these and other major accomplishments of 2008 in this annual report. I would also like to recognize the contributions of those who made the successes possible, including our customers, the King County Council, our partnering cities and advisory groups, and the many businesses and nonprofit organizations in the region.

**Kevin Kiernan,**  
Division Director



## Waste Prevention and Recycling

The Solid Waste Division continues to focus and 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.

### Recycle More. It's Easy to Do.

The division's recycling campaign – Recycle More. It's Easy to Do. – completed its third year of education and outreach, reminding and reinvigorating residents and businesses to recycle through a variety of promotional efforts, including radio and television advertisements, workshops, and public events.

The Best Workplaces for Recycling 2008 award was presented to more than 50 county businesses that have successful recycling programs in place, twice the number that applied in 2007. To receive the award, each business was asked to provide a profile of its programs for the division's Web site ([www.kingcounty.gov/solidwaste/garbage-recycling/best-workplaces.asp](http://www.kingcounty.gov/solidwaste/garbage-recycling/best-workplaces.asp)), describing what made their business a Best Workplace for Recycling 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.

The division also held a Master Business Recycler workshop in June, attended by 27 participants representing more than 10,000 employees from county businesses. Attendees learned about waste prevention, resource conservation, how to conduct an office waste audit, and how to determine the carbon footprint of their business. Following the workshop, an electronic mailing list was set up for attendees to continue their business recycling conversations.

Also in June, the division held a successful Recycle More Neighborhood Challenge for six families in Renton who voluntarily competed against one another to see who could make the biggest reduction in the weight of their weekly garbage. Each week, the families brought their trash to a weigh in and received tips from the county's resident Garbologist Tom Watson on what materials in the garbage could have been recycled. At the end of the four weeks the winner had reduced their household garbage by



*Resident Garbologist Tom Watson provides tips on effective recycling to Renton families.*

82 percent, from more than 16 pounds to 2 pounds. A striking note about this program was how recycling savvy the families were already. They launched into waste reduction by cutting out their use of single-use food packaging and recycling food scraps and food-soiled paper in their yard waste carts. The division received more media coverage from this community event than from any other recycling promotion held in 2008.

In August the division posted a video podcast entitled Be a Better Recycler on the division Web site and on YouTube. The four-minute podcast takes viewers on a house tour as EcoConsumer Project Manager Tom Watson narrates how to make recycling easier and more convenient. The podcast identifies the common barriers to recycling and offers ways to make improvements throughout the home.



## **Waste Prevention and Recycling Programs (continued)**

### **Recycle Food. It's Easy to Do.**

Over the last year, the residential collection service for recycling food scraps and food-soiled paper in the curbside yard waste cart has continued to grow.

Currently, more than 90 percent of the county's single-family curbside garbage customers can recycle food scraps and food-soiled paper – making this service available to more than 251,125 residential customers in the county (not counting Seattle).

To help promote food scrap recycling, the Recycle Food. It's Easy to Do. campaign targeted areas where collection services are available using television advertisements, radio spots, and a video podcast. A revised education brochure on the "how to's" of food scrap recycling was also distributed by the commercial collection companies to more than 137,000 customers – 61,000 more than in 2007. For the second year, the division formed retail partnerships with QFC grocers and Papa John's Pizza to promote food recycling and to distribute educational materials to residents.

The division continued to work with vendors of compostable bags to make them available in grocery and retail stores throughout King County, with locations listed on the division's Web site. The compostable bag is one tool residents can use to make food scrap recycling easier to do. The bags are now available to King County consumers through 27 retailers at more than 100 locations. To encourage the use of compostable bags, samples were distributed to consumers in area QFC stores and through a variety



*At a local QFC, a King County Master Recycler Composter promotes the use of compostable bags for recycling food scraps.*

of community events. The Master Recycler Composters staffed education booths at selected QFC stores, 12 local farmers' markets across the county, and community events.

### **EcoConsumer Campaign Gets the Message to the Media**

The public and the media have many questions about environmental issues, and the King County EcoConsumer campaign responds to those questions using television, radio, and print advertisements; the Internet; and group presentations.



A natural balance of  
consuming and conserving

This multifaceted approach allows a wide spectrum of topics to be covered, including how to increase electronics recycling and food scrap recovery, find the "greenest" products, reduce toxins in the home, save money through reuse, use green remodeling techniques, expand one's recycling horizon, and reduce global warming.

In 2008, this project continued to garner a prolific amount of free media coverage, including an EcoConsumer column published every two weeks in The Seattle Times; EcoConsumer segments every three weeks on KOMO 4 TV news and KOMO 1000 news radio; more than 40 additional television and radio appearances; and numerous other print and online articles. In addition, an innovative new animated EcoConsumer television commercial ran on several local stations. This coverage resulted in more than 25 million media impressions – meaning the number of times residents were exposed to EcoConsumer in the media.

The many EcoConsumer promotions can be viewed on the division's Web site at [www.kcecoconsumer.com](http://www.kcecoconsumer.com).

The Web site has also an added interactive feature – the Eco-Cool Remodel Tool – which allows consumers to take a virtual tour through a home, click on different rooms, and find out exactly how to make the room more green – and save money in the process.

## Participation in Product Stewardship on the Rise

Product stewardship is an overarching strategy for conserving resources and minimizing waste throughout the life cycle of a product. It is a management strategy used to encourage environmentally friendly product design and to shift the responsibility for managing the product at its end of life from government to manufacturers and retailers.

The division has assisted in the implementation or pursued product stewardship strategies for a number of commodities, including:

- Electronic Products:** State legislation was passed in 2006 that requires manufacturers of computers, monitors, and televisions to develop a recycling program for collecting, transporting, and recycling these products at no cost to residents, small businesses, charities, small governments, school districts, and special purpose districts. The program – E-Cycle Washington – launched in January 2009 and includes a network of about 35 take-back locations in King County. The division assisted members of the county's Take it Back Network to become E-Cycle Washington collectors and will continue to promote the program through the media. The E-Cycle Washington program accepts only computers, monitors, and televisions; however, the division will continue to work through the Take it Back Network to provide information about recycling services for a broader range of products, such as printers, copiers, and household electronics.
- Pharmaceuticals:** Group Health pharmacies in King, Kitsap, Pierce, Snohomish, Spokane, and Thurston counties are currently conducting a pilot program to take back pharmaceuticals. Select local retailers began participating in 2008. State legislation that would require retailers to implement

take-back programs was introduced, but did not pass in 2008. It is likely to be discussed in future legislative sessions.

- Telephone Books:** Results are beginning to unfold for a national project to encourage the telephone book industry to reduce the distribution of unwanted books. The project was started by King County and coordinated through the Product Stewardship Institute. The two major industry trade groups, which publish more than 90 percent of all telephone books, have launched an official national Web site to provide consumers with information on how they can opt out from receiving unwanted telephone books at [www.yellowpagesoptout.com](http://www.yellowpagesoptout.com).
- Mercury-containing lights:** The Product Stewardship Institute received funding from a range of state and local governments, including those in Washington, to develop product stewardship approaches for the end-of-life management of fluorescent lights. In King County, Bartell Drugs joined the Take it Back Network for fluorescent bulbs and tubes and is now collecting compact fluorescent bulbs for free at all 65 of their retail locations.



*A customer returns a prescription bottle to Bartell Drugs for recycling.*





## **Waste Prevention and Recycling Programs (continued)**

### **LinkUp: Shingles in Paving Demonstration Prepares to Hit the Road**

In King County (excluding Seattle), more than 17,000 tons of asphalt shingles are disposed of annually, making up about 16 percent of the construction and demolition waste stream. A relatively small quantity of the shingles that come from re-roofing or demolition projects – about 1,000 tons per year – is currently recycled.

To help develop a local market for the material, the division's LinkUp program is leading a paving trial to demonstrate the use of recycled asphalt shingles in hot mix asphalt pavement. The Shingles in Paving Demonstration was developed through a partnership with asphalt shingle recyclers, paving industry representatives, roofing contractors, and transportation and solid waste agencies. It is a multi-year project to design and conduct the paving trial and demonstrate to state and local transportation agencies the effectiveness of recycled asphalt shingles in hot mix asphalt pavement.

In 2008, the King County Department of Transportation, Road Services Division agreed to

sponsor the project by providing a roadway in south King County to be used for the demonstration project. They developed criteria for roadway selection and narrowed the project candidates to two.

The LinkUp team drafted material quality specifications for the use of recycled asphalt shingles as an additive to hot mix asphalt in the paving trial. The team also issued a Request for Information to shingles processors to learn more about their facilities and operations, and to obtain samples of recycled asphalt shingles for laboratory testing. The Washington State Department of Transportation (WSDOT) tested the samples to evaluate their composition and determine what proportion could be used in the hot mix asphalt pavement and meet the specifications. Based on the testing, WSDOT determined that a mix of 3 percent recycled asphalt shingles and 15 percent recycled asphalt pavement would be an optimal mix for hot mix asphalt pavement.

The roadway paving and initial performance and monitoring will occur in 2009. An initial study report is expected to be completed and presented to key transportation agencies in early 2010.



*A local processing facility stockpiles raw and ground asphalt shingles.*

## Household Hazardous Waste Service Responds to Policy Changes

The division provides Household Hazardous Waste (HHW) collection services via the traveling Wastemobile and at the Factoria Transfer Station in Bellevue. HHW collected via both methods is recycled, beneficially reused, or incinerated, when necessary. None is disposed at the Cedar Hills Regional Landfill. In 2008, there was a change in the material acceptance policy to recognize that latex paint is no longer considered a hazardous waste or accepted at HHW facilities. This change was instituted because latex paint no longer contains materials such as lead and mercury that previously required it to be managed as a hazardous waste. Residents can now handle their leftover latex paint by drying it out in the can and disposing of it with their curbside garbage.

Historically, latex paint has comprised approximately 46 percent of the HHW collected in the region. In 2008, HHW collection services were provided for 26,479 customers, which represents about a 38 percent decrease in customers from 2007. This decrease can be attributed to the ban on acceptance of latex paint at the HHW facilities. An initiative is underway to develop a nationally coordinated system for managing latex paint and removing it from the waste stream.

In February 2008, the division initiated a pilot program to accept hazardous wastes from small businesses at the Factoria station and the Wastemobile. (Previously only residential customers were offered the service.) The facilities received materials from 130 small businesses. The division will continue to promote the service for small businesses in 2009.



*Mixing cat litter with leftover latex paint is a common way to dry the paint out more quickly.*



## Waste Prevention and Recycling Programs

<b>Program Name</b>	<b>Intent of Program</b>	<b>Results</b>
<b>Schools Education Program</b>	<p>Elementary school students learn resource conservation messages through assembly programs, classroom workshops, and assistance in forming Green Teams to carry out environmental projects.</p> <p>Middle and high school students receive the EcoConnections classroom workshops. Green Team assistance is also offered at the middle and high school levels.</p>	<p>At the elementary level, the division presented assemblies to 103 schools, reaching 26,274 students; presented 181 classroom workshops to 4,314 students; and supported 79 Green Teams totaling 2,078 students.</p> <p>The division presented 342 EcoConnections workshops to 10,229 students and provided assistance to 18 Green Teams totaling 614 students.</p>
<b>Household Hazardous Waste School Program</b>	<p>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.</p>	<p>The division provided HHW training to 52 teachers, responsible for 8,866 students. It delivered 60 classroom presentations, reaching 1,792 students. Assistance was given to 21 teachers on projects or lessons that affected 1,560 students. Presentations were given to 27 parent groups, reaching 316 parents.</p>
<b>Green Schools Program</b>	<p>Helps schools (both public and private) and school districts to begin or expand conservation practices in:</p> <ul style="list-style-type: none"> <li>• Waste reduction and recycling</li> <li>• Litter reduction</li> <li>• Green building</li> <li>• Hazardous materials management and reduction</li> <li>• Environmental education</li> <li>• Environmental purchasing</li> <li>• Energy conservation</li> <li>• Water conservation</li> <li>• Transportation choices</li> </ul>	<p>In 2008, the division made a number of programmatic improvements, including expanding the program's Web site to include a wide variety of resources for schools.</p> <p>The division assisted 4 school districts and 62 individual schools, bringing the total number of program participants to a record 250 schools and 10 school districts.</p> <p>Below is a summary of some of the school accomplishments in 2008:</p> <ul style="list-style-type: none"> <li>• 20 schools began to recycle food scraps and food-soiled paper.</li> <li>• Most schools have achieved recycling rates between 40 and 60 percent. Seventeen schools significantly increased their recycling rates over the year, one as much as 35 percent.</li> <li>• Many schools reduced their paper use, with one school reducing 28,000 pieces of paper by switching their newsletter from paper to electronic distribution.</li> <li>• Garbage volumes were significantly reduced, with one school reducing their lunchtime garbage volume from 80 bags to 36 bags by recycling bottles, cans, cartons, and food scraps.</li> <li>• Some schools started gardens and on-site food scrap composting, led energy and water conservation campaigns, and added solar panels.</li> </ul>

Program Name	Intent of Program	Results
<b>Take It Back Network</b>	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.	<p>There are currently 27 companies in the Take It Back Network, which provide 34 recycling options for electronics and 69 options for fluorescent lamps.</p> <p>In 2008, network members recycled:</p> <ul style="list-style-type: none"> <li>• 35,392 televisions</li> <li>• 50,941 monitors</li> <li>• 37,290 computers</li> <li>• 14,891 fluorescent bulbs</li> <li>• 57,500 fluorescent tubes</li> </ul>
<b>LinkUp Program</b>	Works to expand markets for recyclable and reusable materials by facilitating an interactive community of businesses, public agencies, and other organizations. LinkUp helps reduce market barriers for a small number of materials selected each year that are identified by King County as priorities for recycling and reuse. The program involves forums, roundtable discussions, demonstrations, and collaborative projects, some of which provide technical assistance to businesses.	<p>LinkUp continued to monitor developments in recycling markets for container glass in Western Washington, and conducted projects to improve recycling of asphalt shingles (discussed earlier), expanded polystyrene (EPS), and wood from construction and demolition sites, referred to as urban wood.</p> <p>LinkUp provided assistance to Total Reclaim, a Seattle-based recycling company, to support their efforts to establish the recycling capacity of EPS in King County. The assistance focused on developing a base of potential customers that are large-quantity generators of EPS.</p> <p>To support recycling markets for urban wood, the LinkUp team investigated ways to support the use of pulp made from urban wood for manufacturing paper.</p>



<b>Program Name</b>	<b>Intent of Program</b>	<b>Results</b>
<b>Master Recycler Composter (MRC) Program</b>	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.	<p>During the 2008 MRC volunteer training program, 29 volunteers were trained, bringing the number of active MRCs on the roster to more than 250. In 2008, MRCs participated in 237 outreach events, recording more than 1,100 hours of outreach to more than 10,000 King County residents. Outreach venues included large-scale community events such as the Puget Consumers Co-op Healthy Living Fair, Concerts at Marymoor Park, the Green Festival, and Issaquah Salmon Days. At these events MRCs staffed general information booths to discuss pertinent issues related to solid waste management and recycling.</p> <p>Education about food scrap recycling was a highlight of this year's activities, with MRCs providing information and giving out samples of compostable food scrap bags at farmers markets and retail stores throughout the county. Education on composting and school presentations continue to be popular.</p>
<b>Waste Free Holidays</b>	Raises awareness of waste prevention by encouraging people to give "experience gifts" instead of "stuff" for the holidays. Program partners, such as event sponsors and retailers, reward consumers by offering discounted experience gifts.	In 2008, 178 businesses and organizations offered discounted experience gifts through this program – a record high. One of these participating partners reported more than \$5,000 worth of sales for their Waste Free Holidays offer. The free media coverage exceeded 3.5 million impressions, meaning the number of times Waste Free Holidays was viewed in the media.
<b>Northwest Natural Yard Days</b>	Promotes natural yard care to residents through education about practices such as mulch mowing, conserving water, using compost and organic slow-release fertilizer, and hand weeding.	<p>The division and 28 agencies partnered to provide discounts on natural yard care products at 62 retail locations between April 15 and May 15, 2008.</p> <p>During this period, residents purchased 29,061 bags of compost, 1,088 mulching mowers, 742 weed pullers, 2,200 bags of organic fertilizer, 517 containers of insecticidal soap, and 3,889 water conservation tools, such as soaker hoses and water wands.</p>

## Sustainable 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 less impact on the environment, are energy efficient, and use recycled materials.



### Efforts Increase to Encourage Construction and Demolition Debris Recycling

The division provides education and information to contractors, project managers, and property owners on how to manage construction and demolition (C&D) debris as a resource rather than a waste.

In 2008, 7,500 postcards were mailed to local contractors, encouraging recipients to download an electronic copy of the *Construction Recycling Directory* from the GreenTools Web site. Free hard copies were also made available. The guide provides a popular listing of the various companies that accept different types of C&D for recycling and reuse. King County GreenTools also continued distributing information on proper deconstruction and salvage practices to people requesting demolition permit packets from the county's Department of Development and Environmental Services. Diversion rates for C&D facilities continue to be posted on the GreenTools Web site, including data for new C&D processors.

Technical assistance on C&D issues was provided to both internal King County and external audiences. GreenTools provided consulting services to assess the deconstruction and salvage potential at more than 10 different job sites (King County, city, and privately

owned sites). General technical assistance on the diversion of C&D materials was provided to more than 300 people who called or e-mailed the county for assistance. In addition, the division renewed a contract agreement whereby The ReStore, a local salvage company, will collect and handle salvage and deconstruction materials for any county project for which it is requested. The ReStore will also provide collection of reusable building materials at special collection events held at the Shoreline Recycling and Transfer Station.



*Salvaged beams from a construction site.*

### Green Building Assistance Provided to the Public, Cities, and Builders

The GreenTools team successfully collaborated on many projects to support residential green building, bringing education and assistance to urban and rural communities. For the past nine years, the division's GreenTools program and Master Builders Association of King & Snohomish Counties have collaborated on the establishment and implementation of the residential Built Green™ program. Through successful outreach to the residential construction industry and



## **Sustainable Building (continued)**

consumers, there are currently more than 13,000 Built Green™-certified homes across the two counties.

GreenTools team members have also supported the Equity and Social Justice Initiative in King County, designed to offer equal opportunities and quality of life to all residents, by providing green affordable housing education through the American Institute of Architects, Built Green™, Habitat for Humanity, and Housing Washington Conferences.

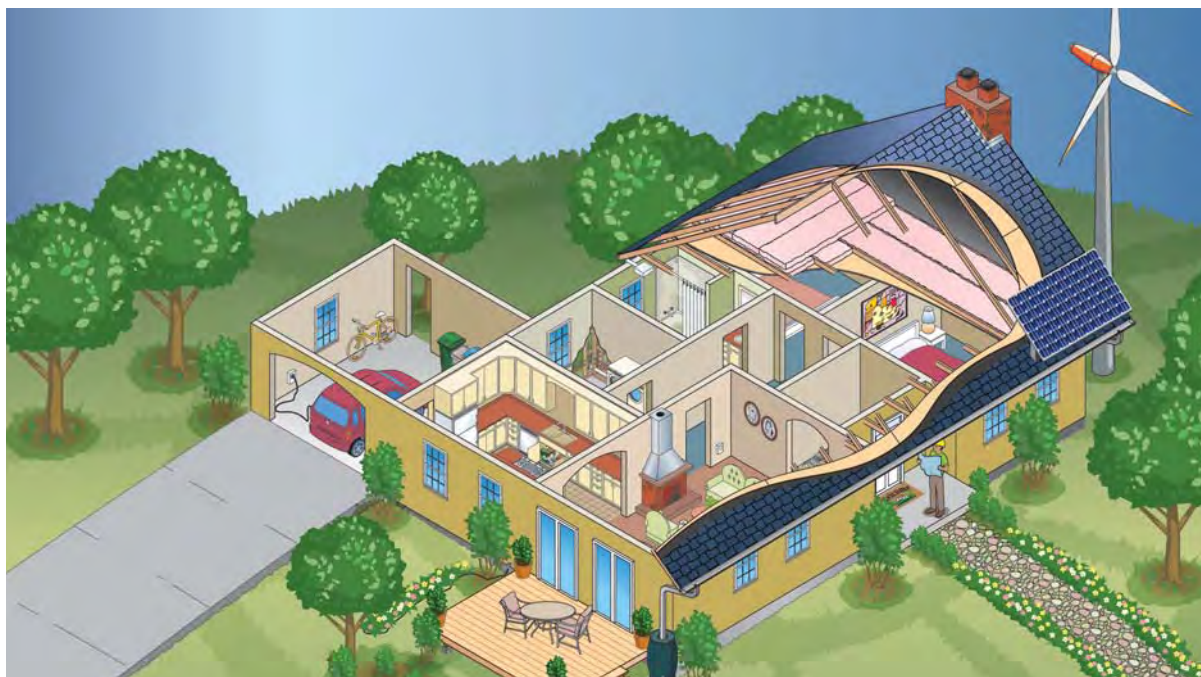
GreenTools further assisted in developing new products for consumers, adding brochures to the successful remodeling guide series with the City of Seattle. In 2008 the partnership released a “do-it-yourself home energy audit” and a “green home buyers guide.” Additional online resources have been added through the EcoConsumer program with the Eco-Cool Remodel Tool discussed in the previous section (at [www.ecocoolremodel.com](http://www.ecocoolremodel.com)).

The GreenTools team followed up on the development of the successful green building CD-ROM toolkit prepared for the cities with a technical training series to help cities create and implement green building programs in their jurisdictions. Trainings were offered in strategic locations throughout the county, including

Issaquah, Redmond, and Renton. The 2008 series included a first-of-its-kind Green Inspectors Training attended by more than 45 people representing 29 cities. Other training sessions included Low Impact Development, Energy Efficient Buildings, Green Materials and Environmental Purchasing, and Introductions to Built Green and Leadership in Energy and Environmental Design™ (LEED™) Certification programs, as well as site tours.

The GreenTools team partnered with the Department of Development and Environmental Services (DDES) and the Water and Land Resources Division to educate the public on rural stewardship through hands-on trainings and the development of brochures and other resources. More than 2,500 Green Home Remodel Guides and Construction Recycling Directories were distributed at the DDES Permit Center. In partnership with DDES, green building technical assistance was provided to more than 80 DDES customers.

GreenTools and DDES also continued to provide special assistance to the Built Green™/Low Impact Development Demonstration Ordinance for several projects, including the Hope VI affordable housing projects, Greenbridge in White Center, and Sunflower on Vashon Island.



*Eco-Cool Remodel Tool – click on a room for tips on green building.*

## Green Building Standards Continue to Evolve

In accordance with King County Ordinance 16147, the division coordinates the countywide Green Building Team. This multi-agency team is charged with helping countywide project teams achieve the maximum possible standards of green building on county building projects.

The division worked with the countywide Green Building Team to revise the existing green building ordinance, which sunset on July 1, 2008. The new ordinance, adopted by Council in late June, expands the green building program to require 1) eligible projects to achieve a Gold LEED™ certification, 2) building and infrastructure projects that cannot achieve LEED™ certification, to incorporate green materials and strategies and to complete a sustainable development scorecard, and 3) development of green operations guidelines for existing buildings. The countywide Green Building Team is developing the tools to help project managers implement the new ordinance.

In conjunction with the GreenTools team, the countywide Green Building Team planned and staged a conference in September that was attended by more



*Renovation of the award-winning Jim Wiley Community Center in White Center saved energy and resources by recycling the previous building at the site rather than demolishing it and starting anew.*

than 150 county and city staff. The event was held at Seattle University's Pigott Hall and included sessions on low impact development, green operations and maintenance, climate change, and setting up a green building program. In addition, tours of the Seattle University Campus and South Lake Union developments were held. Excellence in Building Green awards were given to a number of county projects including the Sammamish Commons, Mercer Slough Environmental Education Center, Jim Wiley Community Center, Metro Atlantic and Central Base Expansion, Chinook Building, Power Distribution Headquarters, SE 304th Street and 124th Avenue SE Intersection Improvement Project, and Transit Custodial Green Cleaning and Conservation Program.

## Green Building Grants Provide Incentives

In 2008, King County GreenTools in partnership with the Wastewater Treatment Division, the Water and Land Resources Division Grant Exchange Program, and Built Green™ provided grants to projects in King County that are raising the bar in green building. Residential projects must meet four- or five-star Built Green™ certification, while commercial projects must meet Silver LEED™ certification or higher. The grants provide added incentive for organizations to increase the environmental performance of their buildings, which can provide long-term savings in the form of lower energy costs, healthier indoor environments, and lower water usage. The grants also help offset the costs sometimes associated with green building and encourage a wider range of business to build green projects.

In 2008, six local government agencies, businesses, and organizations received grant money totaling \$130,000 to support LEED™ projects. In a partnership between the division and Seattle Public Utilities, six Built Green™ grants, totaling \$67,000, were awarded to single-family and affordable multi-family housing projects in the county. The grants funded the application of cutting-edge technologies, such as solar energy, grey water recycling, and reclaimed materials and deconstruction strategies.





## 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.

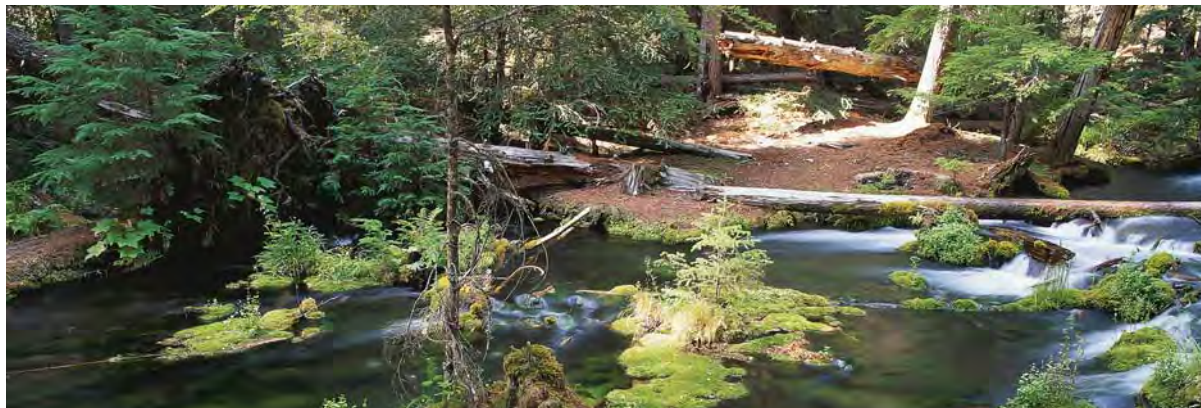
### County's 2008 Climate Change Report Lauds Division

The county's *2007 King County Climate Plan* sets a target of reducing operational greenhouse gas emissions by 80 percent below current levels by the year 2050. The *2008 King County Climate Report* recognized the division for a number of positive accomplishments on the climate change front, including:

- Continued leadership in management of the Cedar Hills Regional Landfill, including award-winning best management approaches for landfill gas management that result in a methane gas collection efficiency of approximately 90 to 95 percent.
- The construction of a new landfill gas-to-energy facility at the Cedar Hills Regional Landfill. Expected to be online in spring 2009, this facility will provide pipeline-quality natural gas to Puget Sound Energy.
- A partnership with the City of Renton, Public Health – Seattle and King County, and Waste Management, Inc. on a sustainable collection pilot to reduce garbage collection to every other week, leading to decreased waste generation, increased recycling, and decreased truck traffic. The City of Renton implemented the collection program citywide in early 2009.

- Promotion of waste prevention, material reuse, energy conservation, climate-friendly materials, composting, construction demolition and recycling, and other practices that reduce home and business greenhouse gas emissions through outreach and programs that encourage behavioral changes.
- A partnership with national and regional stakeholders to develop product stewardship and extended producer responsibility programs and legislation for electronics, fluorescent bulbs and tubes, paint, and unwanted telephone books.
- Development of a model to estimate reductions in greenhouse gas emissions under two scenarios: 1) recycling and composting of discarded materials and 2) discarding of materials into a landfill with 90 percent collection and conversion into natural gas. Based on a related analysis, it was found that in 2008 more than 840,000 metric tons of carbon dioxide equivalent were not emitted into the atmosphere due to the recycling activities of King County residents and businesses.

King County has also completed a draft ordinance that would add new requirements for building projects subject to review under the State Environmental Policy Act (SEPA). Under the new ordinance, all projects in the county's service area that require SEPA review must incorporate an assessment of the project's effects on greenhouse gas emissions. To implement the ordinance countywide, the division has been assisting in further developing the tools and data to support the new reporting requirement, including an easy-to-use worksheet that estimates projected emissions and a method to quantify the effects of recommended strategies to mitigate or reduce those emissions.



### **Landfill Gas-to-Energy Facility Nears Completion**

A new landfill gas-to-energy facility will begin operations at the Cedar Hills Regional Landfill in 2009 to turn landfill gas generated through the decomposition of garbage into pipeline-quality natural gas for the energy market. The facility, which is now in the testing phase, is expected to earn the division more than \$1 million annually from the sale of "green energy." Currently, the landfill gas, composed primarily of methane and carbon dioxide, is burned in flares at the site. The new facility, one of the largest of its kind in the world, will run the landfill gas through a series of processors to remove and destroy harmful emissions and route the remaining pipeline-quality gas through a nearby gas line and into the Puget Sound Energy grid. Bio Energy Washington, who constructed and will manage the facility, says the plant will generate enough gas annually to meet the energy needs of 24,000 homes. The facility is expected to begin operating in 2009.



*Components will "clean" the landfill gas to ready it for the energy grid.*

### **Community Litter Cleanup Program Continues to Make a Difference**

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 2008, more than \$69,000 in grant money from the Washington State Department of Ecology (Ecology) was spent on the program, with an additional investment of nearly \$73,000 from the division.

In 2008, crews cleaned up approximately 136 tons of debris from 104 sites. About 11 percent of the debris was recycled – items included tires, appliances, and junk vehicles.

Ecology also provided \$50,000 in additional funds to support advertising on buses for the division's anti-littering and Secure Your Load outreach efforts. Of the callers to the shared Washington State Litter Hotline (1-800-LITTER1), 739 reported seeing the ads on a bus.

### **Secure Your Load Outreach is Building Awareness**

In 2006, the division launched a renewed effort to increase public awareness of the importance of securing loads when transporting materials in truck beds, in trailers, atop cars, and in open trunks. This effort was undertaken in collaboration with the Maria Federici Foundation and Ecology.

Since 2006, the division has used a number of public outreach methods to promote the Secure Your Load message. At solid waste facilities, these efforts have included the distribution of multi-lingual educational brochures to customers, enforcement of secured load fees, and added "emphasis patrols" by law enforcement officers around solid waste facilities. The division has also advertised on the Web and through other media, such as bus and radio advertisements.



## Environmental Stewardship (continued)

In 2008, our public outreach efforts had the following results:

- Unsecured load fees were assessed to 2,395 customers, a 33 percent increase over 2007.
- In a two-week period in April, law enforcement officers made 818 contacts of facility customers and cited 7 percent of them for failure to secure their loads. Several officers reported they observed good compliance with secured load laws.
- Between March and December, bus advertisements about secured loads ran for at least three months; two-thirds of the costs were funded by grants. The advertisements included a hotline number to call to report violators.

### New Illegal Dumping Law Increases Enforcement

In 2008, the King County Council adopted an ordinance to clarify and strengthen the county's role in enforcing laws that prohibit illegal dumping on public and private lands. Illegal dumping is a continuing problem for agencies, businesses, and the general public who find yard waste, appliances, car bodies, and other wastes dumped on their personal property, on public property, and on road rights of way.

The new legislation enhances the county's authority to cite and prosecute illegal dumpers. For example, it

allows the county to charge a restitution fee to illegal dumpers and, in turn, provide monetary relief to victims of the illegal dumping. The fee can be waived if the illegal dumper cleans up and properly disposes of the waste.

The county also developed a new program called the Community Cleanup Assistance Program. This program enables environmental site inspectors from the county, cities, and other agencies to issue free disposal vouchers to the property owners where illegal dumping has occurred. In 2008, approximately \$5,000 worth of disposal vouchers was issued, resulting in the clean up of nearly 50 tons of debris.

The division also expanded illegal dumping prevention efforts through continued advertising and public outreach, such as advertisements on buses and the radio, and community meetings. The division continues to promote the reporting of violations through its Illegal Dumping Hotline number (206-296-SITE).

### Cleanup Efforts Continue Under Environmental Programs

#### Contaminated Sites Program

Through the Contaminated Sites Program, the division provides technical assistance and environmental assessment services to King County divisions and departments that own or acquire property that may be



*Advertising on buses proves effective in raising citizen awareness.*

impacted by contamination. Established under King County ordinance, the program maintains a revolving fund to expedite environmental assessments and cleanups via a task order contract with an engineering consulting firm. In 2008, the program assisted in the cleanup of property adjacent to the Duwamish River slated for fish migration enhancements and funded seven Phase I environmental assessments for property acquisition projects.

**Brownfields Program**

In 2008, the King County Brownfields Program continued to use U.S. Environmental Protection Agency grant funds to conduct environmental site assessments and provide technical assistance to

municipalities and nonprofit organizations in the county. The division contracts with the nonprofit Environmental Coalition of South Seattle (ECOSS) and environmental consultant CDM to implement the program.

While CDM continued to conduct site-specific Phase I and Phase II environmental site assessments in 2008, ECOSS assembled “micro-inventories” of potential Brownfields sites in several communities in the county, including the City of Bothell, the International District in Seattle, and unincorporated White Center. These inventories are used to identify properties with “recognized environmental conditions” that might impede redevelopment.

## Capital Projects

The opening of the Shoreline Recycling and Transfer Station in 2008 kicked off the most active period of construction for the Solid Waste Division in decades. In accordance with the approved *2006 Solid Waste Transfer and Waste Management System Plan*, the Shoreline station was completed, while two others are in pre-construction phases. Other renovations are also in progress at transfer facilities and the landfill to pave the way for a sustainable future.

### Shoreline Station Renovation Takes the LEED™

The newly constructed Shoreline Recycling and Transfer Station, which opened in February 2008, received the highest possible honor from the U.S. Green Building Council – a Leadership in Energy and Environmental Design (LEED™) platinum certification. Shoreline is one of only 65 projects worldwide – and the only transfer station ever – to achieve a platinum rating.



*Solar panels and a rain water collection system are just two of the Shoreline station's sustainable features.*



## Capital Projects (continued)

The U.S. Green Building Council recognized the Shoreline facility for its many environmentally sustainable features including:

- Recycling of wood, metal, and concrete from the deconstruction of the former transfer building.
- Rooftop solar energy panels that generate electricity and provide about five percent of the building's energy needs.
- A rainwater collection system that collects and stores up to 3,750 gallons of rainwater for reuse in washing floors and equipment and for flushing toilets. This system reduces water needs by almost 60 percent.
- Installation of translucent windows on the building's walls and roof that allow natural light to filter into the building. Sensors detect when daylight levels are low and trigger the electrical lights to go on. This system reduces annual energy needs by 50 percent.
- Recycled materials used throughout the building including recycled steel in the building's structure, a cement substitute called fly ash, cabinets made of wheat straw instead of traditional hardwoods, and recycled-content carpet and flooring.

The award also recognizes the division's innovative measures to protect and restore Thornton Creek, which runs along the Shoreline property. The creek hosts a diversity of wildlife, making its protection an extremely high priority for the local community. Several innovative systems were employed to protect and restore the creek corridor:

- Invasive plants were replaced with a buffer of drought-tolerant native vegetation to conserve water, protect creek banks from erosion, and provide habitat for birds and other wildlife.

- Paved areas were removed, and the buffer around the creek was increased.
- Runoff from roadways was channeled to a stormwater filtration system and detention pond; this system releases stormwater to the creek at a rate that prevents erosion or flooding.

The Thornton Creek Alliance recognized the division for working with local residents and alliance members to ensure that improvements at the site would help restore and enhance Thornton Creek. An educational kiosk, which features a mosaic representation of the creek made of recycled glass, was placed overlooking the creek to display the key message that all citizens share the watershed and to describe the green building features of the station.

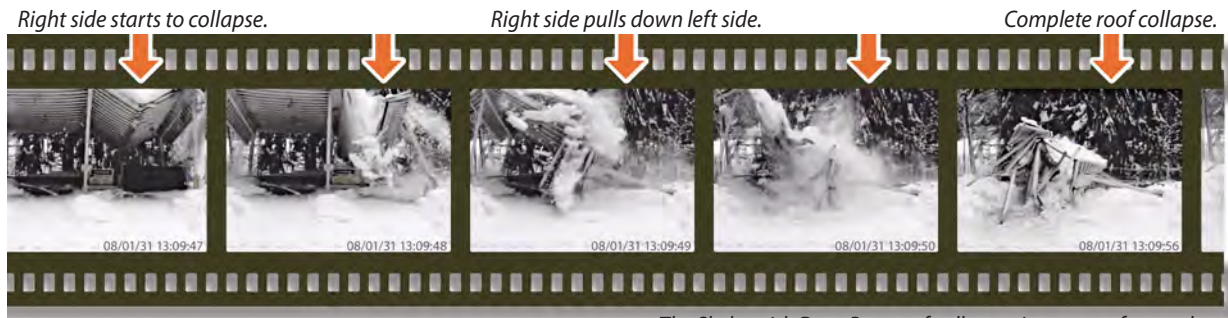
## Bow Lake Station Renovation Ramps Up

The Bow Lake Transfer Station in Tukwila is being upgraded in two phases. Phase I involves preparation of the site adjacent to the current building on which the new transfer building will be constructed (Phase II). In 2008, the division received the land use and building permits for Phase I and advertised for bids to conduct the site preparation work, which began in February 2009.

Design of the new recycling and transfer station building is more than 50 percent complete. The new Bow Lake station will have sustainable features similar to those at Shoreline. The division will seek the highest possible LEED™ rating for the station.



*Conceptual site design for the new Bow Lake station.*



*The Skykomish Drop Box roof collapses in a span of seconds.*

## January Snowfall Topples Drop Box Roof

In January 2008, the roof of the Skykomish Drop Box collapsed under six feet of snow and ice. Snowfall in the mountain regions of King County was so severe that both the governor and county executive declared a State of Emergency for these areas. There were no customers present at the site when the incident occurred, but the 2,500-square-foot structure demolished electrical components and other features of the site when it fell.

Temporary service was restored to the site in March 2008. The emergency declaration allowed the division to expedite the permitting process so that the roof could be replaced before the next winter season arrived. The new roof was completed in December, and 100 percent of the old roof, approximately 11,710 tons of metal, was recycled.

## Other Facility Improvements

**Factoria Transfer Station in Bellevue:** Factoria will be the third transfer station reconstructed under the approved transfer facility development plan. A Request for Proposals has been issued for a site design consultant.

**Enumclaw Transfer/Recycling Station:** A seismic retrofit of the rural Enumclaw transfer station, scalehouse, and other site buildings was completed in 2008.

## Landfill Efficiency Saves Time and Money

Operation of the Cedar Hills Regional Landfill near Maple Valley is an environmentally sound method of disposal that is less costly to ratepayers than solid waste disposal via waste export or waste-to-energy technologies. Therefore, every effort is being made to preserve this cost-effective disposal option as long as feasible.

To maximize the life of the landfill, the division continues to explore ways to improve operational efficiency to preserve landfill capacity. In 2008, the division began using tippers to empty garbage filled trailers. The tippers replace the walking floor trailers, which reduces trailer unloading time and wear and tear on equipment.



*The new tippers at the landfill save staff time and ratepayer dollars*

## Landfill Development Continues with Area 7

Solid waste is disposed at the landfill in engineered cells or refuse areas. As each refuse area fills with garbage and begins to reach its permitted capacity, it is closed in successive stages. The currently active refuse area, Area 6, has reached about 80 percent capacity. Filled sections of Area 6 have been closed by placing interim or final cover on them, which consists of a 12-inch soil layer, flexible membrane liner, and a top soil layer for growing vegetation. Once the remainder of Area 6 is filled, disposal will be transitioned to the new Area 7, which is expected to occur in late 2009 or early 2010. Excavation of Area 7 began in 2008, and its facility components (e.g., landfill gas, stormwater, and leachate collection pipes; plastic liners; and pump stations) will be installed in 2009.



## Public Information for the Digital Age

Podcasts, blogs, Twitter – the Internet has forever altered the way information flows to and from the public by adding high-tech options to our communication tools. While public information about the division is still provided through brochures, fliers, and other traditional methods, the World Wide Web has added a new array of communication technologies to enhance messages and make them more interactive.

The division's EcoConsumer Web site illustrates use of the many new communication tools available (at [www.kcecoconsumer.com](http://www.kcecoconsumer.com)). EcoConsumer is an informational program that focuses on striking a balance between consuming and conserving. This Web site hosts a wide array of radio and television advertisements, as well as a video podcast that walks consumers through some easy ways to be a better recycler. This year the program launched a new interactive Web feature called The Eco-Cool Remodel Tool. It features a virtual home where users can click on different rooms and view tips on how to make the room more "green." Visitors to the Web site can also exchange ideas with the division's EcoConsumer Tom Watson and others by clicking on the link to *EcoConsumer on Twitter*.

Visits to the division's Web site continue to grow as the public becomes more and more connected. Use of the Web site far outstrips the number of telephone inquiries by about 9 to 1. In 2008, Web site visits totaled 773,907, with major areas of interest including the following sites:

- The "What Do I Do With ...?" feature received 132,446 site visits and now lists more than 440 vendors that accept materials for reuse, recycling, or disposal. The plastics category was reorganized to list the various types by shape, size, and use to help consumers determine whether the item can be recycled. In addition, an "e-cycle" (electronics recycling) logo was added to highlight businesses that participate in the new state-mandated electronics take-back program.
- Transfer station- and facility-related information, including hours of operation, directions, and station closures, is

highlighted on the division's home page. In 2008, the division posted daily updates on the status of facilities during major weather events, such as heavy snow storms and icy conditions. Visits to the transfer facility pages averaged about 12,000 per month.

- The Online Materials Exchange site continues to be popular, providing a free online exchange program for reusable household items for sale, exchange, or purchase. Yard sales are also listed, and the site has a mapping capability for locating the sales.
- The Take it Back Network is 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. Activity on this Web site has grown as people are becoming more aware that products such as electronic equipment and fluorescent bulbs and tubes, which can contain potentially hazardous lead, mercury, and/or cadmium, cannot be safely disposed of in the garbage. As the recycling opportunities for these products have increased through the efforts of the division's Take it Back Network, so has the popularity of this Web site.

The division's Customer Service Unit (CSU) fields customer inquiries that come by telephone and through the "Contact Us" Web site comment form. In 2008, the team responded to nearly 66,000 telephone inquiries and 1,298 Web site e-mail requests. The CSU assists customers with Web site searches to help them download brochures and access detailed information about programs. They also answered 828 calls to the Illegal Dumping Hotline.



## 2008 Solid Waste Division Awards

It was an award-winning year for the Solid Waste Division with strides in green building, environmental stewardship, public outreach, and the management of King County's solid waste system. In an award notification letter from the Solid Waste Association of North America, judges wrote "your program serves as a beacon to others throughout North America and truly defines what this award was developed to highlight." A list of awards for 2008 follows.

### National

Shoreline Recycling and Transfer Station  
*LEED™ for New Construction – Platinum Certified*  
U.S. Green Building Council

Solid Waste Management  
*Excellence Award – Silver*  
*Integrated Solid Waste Management Category*  
Solid Waste Association of North America

Recycle More. It's Easy to Do.  
*Excellence Award – Silver*  
*Public Education Category*  
Solid Waste Association of North America

Solid Waste Management  
*Innovation Award*  
Solid Waste Association of North America

Solid Waste Division  
*2008 Waste News Environmental Award, Public Sector*  
Waste News magazine

Rechargeable Battery Recycling  
*National Community Award*  
Rechargeable Battery Recycling Corporation

### Regional

Shoreline Recycling and Transfer Station  
*What Makes it Green? – Honorable Mention*  
American Institute of Architects

Recycle More. It's Easy to Do.  
*Totem Award – Public Relations Components,*  
*Special Publications – TV Advertising*  
Public Relations Society of America, Puget Sound Chapter

Recycle More. It's Easy to Do.  
*Totem Award – Public Relations Programs, Community*  
*Relations – Government*  
Public Relations Society of America, Puget Sound Chapter

### State

Local Hazardous Waste Management Program  
in King County  
*Quicksilver Champions*  
Washington State Department of Ecology

### Local

Shoreline Recycling and Transfer Station  
*Grand Award – Project of the Year*  
Northwest Construction Consumer Council

Shoreline Recycling and Transfer Station  
*Green Project of the Year*  
Northwest Construction Consumer Council

Shoreline Recycling and Transfer Station  
*King County Excellence in Building Green*  
King County Green Building Team







## Planning for the Future

As we move toward the future, environmental stewardship is infused in all of our programs and activities, positioning the division and its regional partners as leaders in the areas of green building, increased producer responsibility, energy conservation, and environmental mitigation in all construction and operations.

The division will build on this momentum as it updates the *2001 Comprehensive Solid Waste Management Plan*. The division will continue to work closely with its advisory committees – the Solid Waste Advisory Committee and the Metropolitan Solid Waste Management Advisory Committee – on the direction of the plan policies and recommendations. Division staff are also meeting with individual cities and the Unincorporated Area Councils.

With this new plan, recommended waste prevention and recycling strategies are targeted toward specific commodities or consumer sectors that show the greatest opportunities for improvement. The division is also proceeding with the modernization of its transfer facilities and preservation of the regional landfill, in accordance with the approved *Solid Waste Transfer and Waste Management Plan*. Facility reconstruction and improvements are being conducted in phases to minimize service disruptions to customers and manage resources in a fiscally responsible manner. With the uncertain economic conditions, the division is routinely monitoring tonnage projections and other data, and adjusting

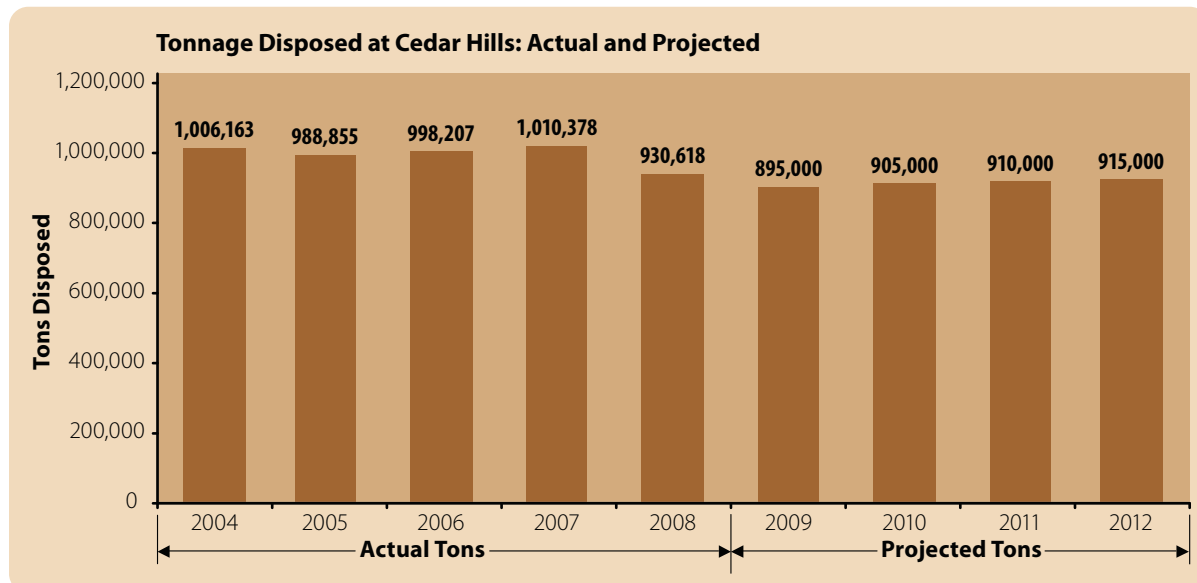
expenditures as necessary, to ensure that the division remains within its financial plan.

The Site Development Plan for the Cedar Hills Regional Landfill will move through the State Environmental Policy Act (SEPA) review process, as the division works to extend the life of this valuable asset. A SEPA review will be conducted on the division’s recommended alternative for maximizing landfill life to ensure that it is environmentally sound and economically feasible.

### 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 estimated recycling rate for 2008 is about 46 percent.

The recent downturn in the economy has led to reduced consumer spending and business activity, employment and income, and housing prices. As a result, tonnage disposed at the Cedar Hills landfill decreased 8 percent in 2008 from the previous year to 933,500 tons.



## Appendices

Note: Totals may vary slightly due to rounding.

**Table A-1: 2008 Estimated Population and 2007 Housing Data (excludes Seattle)**

Jurisdiction	Population 2008	Single-Family Units 2007	Multi-Family Units 2007	Mobile Homes 2007
Unincorporated	341,150	111,169	19,375	7,526
Incorporated	965,155	228,511	142,672	11,174
<b>Total</b>	<b>1,306,305</b>	<b>339,680</b>	<b>162,047</b>	<b>18,700</b>

Sources: 1. Office of Financial Management (OFM), April 1 Population of Cities, Towns, and Counties, Used for Allocation of Selected State Revenues  
 2. State of Washington, Annual Growth Report King County 2008

**Table A-2: 2008 Single-Family (1-4 units) Curbside Collection - Service Subscribers (excludes Seattle)**

Area	Curbside Garbage and Recycling	Curbside Yard Waste
Unincorporated	78,947	32,863
Incorporated	221,907	151,556
<b>Total</b>	<b>300,853</b>	<b>184,419</b>

**Table A-3: 2008 Single-Family (1-4 units) Curbside Collection - Average Pounds per Month (excludes Seattle)**

Area	Garbage	Recycling	Yard Waste
Unincorporated	123	54	124
Incorporated	110	64	121
<b>Countywide</b>	<b>113</b>	<b>61</b>	<b>122</b>

**Table A-4: 2008 Curbside Residential Recycling Tonnage (excludes Seattle)**

	Mixed Paper	News-Print	Card-Board	Glass	Tin & Steel	Alum.	Plastic	Yard Waste	Total
Unincorporated	9,283	7,540	2,855	4,251	620	218	658	24,390	49,816
Incorporated	33,515	23,492	8,672	13,847	1,980	707	2,096	110,333	194,643
<b>Total</b>	<b>42,798</b>	<b>31,032</b>	<b>11,527</b>	<b>18,098</b>	<b>2,600</b>	<b>926</b>	<b>2,754</b>	<b>134,723</b>	<b>244,459</b>

**Table A-5: 2008 Tons Disposed by Transfer Station and Drop Box**

Transfer & Drop Box Stations <sup>1</sup>	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total
Algona	35,554	38,257	38,043	33,695	<b>145,549</b>
Bow Lake	74,969	79,905	81,285	69,464	<b>305,623</b>
Cedar Falls Drop Box	855	1,093	1,080	760	<b>3,789</b>
Enumclaw	5,757	6,226	6,396	4,954	<b>23,333</b>
Factoria	36,437	39,067	39,976	34,542	<b>150,022</b>
Houghton	41,018	43,142	42,363	35,892	<b>162,415</b>
Renton	17,125	19,307	17,544	16,356	<b>70,332</b>
Shoreline	4,889	11,537	11,519	10,522	<b>38,467</b>
Skykomish Drop Box <sup>2</sup>	103	223	193	177	<b>696</b>
Vashon	1,971	2,166	2,329	1,681	<b>8,148</b>
Vashon Special Waste	0	1	0	0	<b>1</b>
<b>Tons Disposed by Facility</b>	<b>218,576</b>	<b>240,700</b>	<b>240,536</b>	<b>207,867</b>	<b>907,679</b>

<sup>1</sup> Shoreline was closed until February 15, 2008 for construction; until that date most solid waste collected in Shoreline was transferred to a solid waste facility in Snohomish County and disposed at Cedar Hills.

<sup>2</sup> Solid waste transported from Skykomish to the Houghton station; this row not added to totals.



**Table A-6: 2008 Total Tons Disposed by Origin**

System Origin	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total
Total Transfer Station Tons	218,576	240,700	240,536	207,867	907,679
Total Regional Direct Tons	1,078	1,227	2,707	841	5,853
Total - Other	6,883	3,277	3,743	3,182	17,086
<b>Total Solid Waste Disposed</b>	<b>226,537</b>	<b>245,204</b>	<b>246,986</b>	<b>211,890</b>	<b>930,618</b>

**Table A-7: 2008 Solid Waste Tons Disposed by Customer Type**

Transfer Facility	- Self Haul Customers -		- Collection Companies -	
	Tons Disposed	% of Total	Tons Disposed	% of Total
Algona	38,980	27%	106,569	73%
Bow Lake	51,578	17%	254,045	83%
Cedar Falls Drop Box	3,789	100%	0	0%
Enumclaw	13,472	58%	9,861	42%
Factoria	27,221	18%	122,800	82%
Houghton	33,796	21%	128,619	79%
Renton	15,751	22%	54,582	78%
Shoreline <sup>1</sup>	13,940	36%	24,527	64%
Skykomish Drop Box	606	100%	90	0%
Vashon	5,506	68%	2,642	32%
<b>Total</b>	<b>204,640</b>	<b>23%</b>	<b>703,734</b>	<b>77%</b>

<sup>1</sup> Shoreline was closed until February 15, 2008 for construction.

**Table A-8: 2008 Transfer Facility Transactions by Customer Type**

Transfer Facility	- Self Haul Customers -		- Collection Companies -	
	Transactions	% of Total	Transactions	% of Total
Algona	132,096	87%	20,237	13%
Bow Lake	144,306	73%	52,575	27%
Cedar Falls Drop Box	19,820	100%	0	0%
Enumclaw	45,743	97%	1,659	3%
Factoria	94,191	81%	21,880	19%
Houghton	107,947	83%	21,418	17%
Renton	65,172	86%	10,837	14%
Shoreline	45,569	91%	4,257	9%
Skykomish Drop Box	1,577	89%	200	11%
Vashon	21,449	98%	368	2%
<b>Total</b>	<b>677,870</b>	<b>84%</b>	<b>133,431</b>	<b>16%</b>

**Table A-9: Annual Solid Waste Tons Disposed, 1977- 2008**

<b>Year</b>	<b>Rural Landfills</b>	<b>Transfer Stations</b>	<b>Cedar Hills Regional Direct</b>	<b>Cedar Hills Other Waste</b>	<b>Total Disposed</b>
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	44,290	848,439	483,950	58,105	1,434,784
1991	28,553	814,919	258,319	53,014	1,154,805
1992	23,656	770,448	119,340	21,317	934,761
1993	21,020	716,437	144,973	24,740	907,170
1994	10,288	633,408	150,400	22,422	816,518
1995	7,388	642,498	146,024	26,610	822,520
1996	7,766	594,736	190,790	23,740	817,032
1997	8,110	607,256	229,007	24,448	868,821
1998	8,228	626,874	226,617	22,005	883,724
1999	3,949	692,921	214,422	18,015	929,307
2000	-	711,565	216,169	19,440	947,174
2001	-	696,664	222,664	16,982	936,310
2002	-	683,965	238,290	17,233	939,488
2003	-	704,127	257,283	17,426	978,836
2004	-	867,917	119,110	19,136	1,006,163
2005	-	944,100	25,304	19,451	988,855
2006	-	962,407	3,381	32,418	998,207
2007	-	956,498	13,123	40,757	1,010,378
2008	-	907,679	5,853	17,086	930,618



**Table A-10: 2008 Transfer Station and Drop Box Recycling Tonnage**

	Appliances	Electronics <sup>1</sup>	Misc. <sup>2</sup>	Scrap Metal	Card-board	Paper <sup>3</sup>	T-A-P-G <sup>4</sup>	Clean Wood / Yard Waste	Total Tonnage
Bow Lake	603	2	0	0	670	745	321	0	2,342
Cedar Falls Drop Box	3	0	4	0	124	136	131	309	708
Enumclaw	240	1	13	0	232	442	220	500	1,648
Houghton	0	0	4	0	442	293	124	0	864
Renton	0	0	4	0	365	393	220	0	983
Shoreline	283	71	7	426	212	163	94	2,023	3,279
Skykomish Drop Box	0	0	0	0	10	14	18	0	43
Snoqualmie Pass Recycling Area	0	0	0	0	47	20	34	0	101
Vashon	239	4	3	0	61	225	485	0	1,016
<b>Total Tonnage</b>	<b>1,368</b>	<b>78</b>	<b>35</b>	<b>426</b>	<b>2,164</b>	<b>2,432</b>	<b>1,648</b>	<b>2,832</b>	<b>10,983</b>

<sup>1</sup> Includes televisions and DVD/VCR/CD players.

<sup>2</sup> Includes fluorescent bulbs and tubes, batteries, reusable household goods and building materials, and textiles.

<sup>3</sup> Includes newspaper and mixed paper.

<sup>4</sup> T-A-P-G = tin cans; aluminum cans; plastic bottles, jugs, and tubs; glass bottles and jars.

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

**Table A-11: Number of Telephone Inquiries by Type**

Appliance Recycling	2,556
Complaints	71
Computer/Electronics Recycling	1,943
Construction/Demolition/Landclearing Debris	3,040
Curbside Recycling	1,026
Directions to Facilities	3,044
Furniture	977
General Recycling	2,213
Hazardous Waste	2,786
Hours of Operation	7,633
Illegal Dumping	828
Junk Vehicles	511
Latex Paint Disposal Policy	738
Metal	908
Non-assistance Transfers and Wrong Numbers	2,012
General Inquiries <sup>1</sup>	7,057
Residential Garbage Issues	3,070
Special Collection Events	855
Special Waste	691
Televisions	2,834
Transfer Stations	19,209
Yard Waste	1,821
<b>Total</b>	<b>65,823</b>

<sup>1</sup> Other general inquiries include calls about personnel, weather-related events, junk mail, business recycling, composting, Council contacts, accounts, or publications.

Chart A-1: Solid Waste Division Actual Revenues and Expenditures. Year Ending 12/31/2008

Manager / Administration			
<b>Waste Prevention &amp; Recycling and Mod. Risk Waste</b>	<ul style="list-style-type: none"> <li>• Education</li> <li>• Technical and financial assistance</li> <li>• Collection services</li> </ul>	<b>Expenditure</b> \$8,584,483 27 FTEs	<b>Revenue</b> Disposal fees \$6,280,057 Haz. waste \$2,077,694 Uninc. household fees \$226,732
<b>Landfill Operations</b>	<ul style="list-style-type: none"> <li>• Operate and maintain active and closed landfills</li> <li>• Landfill and equipment Replacement transfer</li> <li>• Landfill rent</li> </ul>	<b>Expenditure</b> \$24,754,438 47 FTEs	<b>Revenue</b> Disposal fees \$24,177,601 Interest \$576,837
<b>Transfer Station Operations</b>	<ul style="list-style-type: none"> <li>• Collect fees</li> <li>• Monitor waste</li> <li>• Equipment replacement transfer</li> </ul>	<b>Expenditure</b> \$13,266,452 107 FTEs	<b>Revenue</b> Disposal fees \$13,266,452
<b>Transportation Operations</b>	<ul style="list-style-type: none"> <li>• Transport garbage to landfill</li> <li>• Haul leachate &amp; maintenance material</li> <li>• Equip. replacement transfer</li> </ul>	<b>Expenditure</b> \$12,072,303 83 FTEs	<b>Revenue</b> Disposal fees \$12,072,303
<b>Maintenance Operations</b>	<ul style="list-style-type: none"> <li>• Maintain facilities and equipment</li> <li>• Procure and control inventory</li> </ul>	<b>Expenditure</b> \$10,388,547 70 FTEs	<b>Revenue</b> Disposal fees \$10,388,547
<b>Operations Administration</b>	<ul style="list-style-type: none"> <li>• Maintenance planning for operations functions</li> </ul>	<b>Expenditure</b> \$1,154,099 10 FTEs	<b>Revenue</b> Disposal fees \$1,154,099
<b>Capital Facilities<sup>1</sup></b>	<ul style="list-style-type: none"> <li>• Plan and execute capital projects</li> <li>• Environmental monitoring</li> <li>• Operations support</li> </ul>	<b>Expenditure</b> \$6,172,203 36 FTEs	<b>Revenue</b> Disposal fees \$5,044,481 C&D fees <sup>2</sup> \$901,400 DOE and EPA grants \$226,322
<b>Debt Service</b>		<b>Expenditure</b> \$5,955,757 0 FTEs	<b>Revenue</b> Disposal fees \$5,955,757
<b>Administration &amp; Fiscal Services</b>	<ul style="list-style-type: none"> <li>• Manage fiscal functions</li> <li>• Administer customer service</li> <li>• Personnel functions</li> <li>• Payroll</li> <li>• Planning</li> <li>• Communication</li> </ul>	<b>Expenditure</b> \$12,797,173 55 FTEs	<b>Revenue</b> Disposal fees \$12,487,935 Interest \$309,238

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

<sup>2</sup> Supports construction and demolition debris program costs.

Summary of 2008 Actual Activities	
2008 Total revenues	\$94,562,983
Fund balance	-\$582,472
2008 Total operating expenditures	\$95,145,455
2008 Total employees	435



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