Council Meeting Date: January 19, 2010 **Agenda Item: 7(a)**

CITY COUNCIL AGENDA ITEM
CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	King County Solid Waste Management Comprehensive Plan Update
DEPARTMENT:	Public Works
PRESENTED BY:	Mark Relph, Public Works Director

PROBLEM/ISSUE STATEMENT:
King County is well into the formal update of the Comprehensive Solid Waste Plan (Plan). A draft Plan has been prepared with public comment scheduled to be concluded in early February. The purpose of this staff report and discussion with Council is to review the staff comments to date, the Council's role in this process and the schedule for adoption of the Plan.

BACKGROUND
In August 1995, Council passed Resolution 26, authorizing the execution of an Interlocal Agreement (ILA) between the City of Shoreline and King County for solid waste management services. The ILA designates King County as the entity to prepare a comprehensive plan to manage regional solid waste transfer and disposal.

In 2001, the King County Solid Waste Division implemented a regional planning effort to develop a Comprehensive Solid Waste Management Plan (the Plan) that would provide the strategy for managing the solid waste system's garbage and recycling service over the next 20 years. Thirty-seven cities and 250 people at public meetings contributed to the project. On November 28, 2001, the county transmitted the completed Plan to cities for review, and on March 25, 2002, the City Council adopted the King County 2001 Comprehensive Solid Waste Management Plan.

As required by law, the Plan is to be updated every five years. In December 2005, the County notified the cities that the update process had been initiated. Since then, the County has involved stakeholders, such as the Solid Waste Advisory Committee, the King County Regional Policy Committee, the Suburban Cities Association, and the Metropolitan Solid Waste Management Advisory Committee (MSWMAC). Councilmember Chris Eggen and Public Works Director Mark Relph represent the City on MSWMAC and submitted comments to the draft Plan (see attachment A), which have been incorporated into the current draft Plan.

The County completed and published the draft Plan on October 8, 2009, and cities have until February 4, 2010 to review and comment on the preliminary draft. The final draft Plan is expected to be completed in July 2010, if the Department of Ecology finishes their review within 60 days. The suburban cities and the King County Council will then have 120 days to adopt it.

A copy of the draft Plan can be found on the King County web page: http://your.kingcounty.gov/solidwaste/about/Planning/documents/DRAFT-2009-comp-plan.pdf. Attachment C is a copy of the Forward and Introduction sections from the Plan and gives a brief summary of the key accomplishments and the future direction of solid waste management within each aspect of the operation.

The central policy issue behind this Plan has been the issue of the County's landfill eventually reaching capacity and the decision to export the waste to another site; assumed at this point to be via the railroad. Another alternative to convert the "Waste to Energy" was considered, but was not recommended by MSWMAC and not formally accepted by the County Council. Therefore, the significant policy issues of the Plan are focused at maximizing the capacity of the landfill with the eventual need to export the waste. At the beginning of each chapter of the Plan is a list of guiding policies specific to that chapter. These policies have been reviewed in detail with MSWMAC and as part of the public review process. Attachment is D is a summary by chapter of the guiding policies.

Eventually, a new Interlocal Agreement (ILA) for solid waste services between the County and the City of Shoreline, along with all of the other cities participating in this process, may come back to Council for review and approval within the next year or more. The current ILA is in effect until June of 2028, so there is no immediate need to revise the ILA. However, there has been some preliminary discussion about the need to amend the agreement for a variety of reasons; the closing of the Cedar Hills landfill and long-term bonding options being key. An ILA is necessary for all parties, as it will set long-term predictability for service and rates, plus it will allow the County to pursue long-term financial strategies in managing waste disposal.

RECOMMENDATION

No action is required.

Approved By: City Manager ____ City Attorney ____

ATTACHMENTS

Attachment A – City of Shoreline's Comments to King County's draft 2009 Solid Waste Management Comprehensive Plan
Attachment B – King County Solid Waste Division Timeline for the Solid Waste Management Comprehensive Plan
Attachment C – Forward and Introduction Sections from the King County 2009 Draft Solid Waste Comprehensive Plan
Attachment D – Summary of Plan Policies by Chapter

Attachment A

City of Shoreline's Comments
King County's draft 2009 Comprehensive Solid Waste Management Plan

1. Waste Prevention and Recycling Policies Draft Chapter

Page 1
WPR-5 Work with regional partners to find the highest value end uses for recycled materials, ~~and~~ support market development and explore legislative and educational opportunities that encourage the purchase of products made from recycled materials.

2. Collection and Processing Policies Draft Chapter

Page 1
CP-3 Design collection systems that reduce the production of greenhouse gases.

Page 13
Paragraph 3, last sentence: An added benefit was the reduction in truck traffic, greenhouse gases and transportation costs with less frequent collection cycles.

3. Disposal System Chapter

Page 1
DS-3 : Examine options for partial early waste diversion and disposal after the Cedar Hills Regional Landfill closes, considering waste export to an out-of-county landfill, a waste-to-energy facility(ies), and other emerging disposal or conversion technologies that meet or exceed the highest federal, state, and local standards for protection of public health and the environment, ~~to~~ and that can handle all or a portion of the county's waste.

Page 13: Conversion Technologies
Paragraph 2, sentence 1: Conversion technologies have various requirements in terms of the size of materials (or feedstock) they can process, the amount of materials they can process per day, the amount of materials they need to process per day to be cost effective, ...

Page 16: Disposal in an Emergency
Paragraph 2, sentence 2: The local UASI comprises....
Comment: I believe that Shoreline has been and is currently a participant in the UASI.

Page 17
Paragraph 2, third line from the bottom: Emergency disposal of material other than municipal solid waste at Cedar Hills will not be considered.
Question: Given the unknown and variable challenges during an emergency, this statement is too strong. Recommendation: Emergency disposal of material other than municipal solid waste will only be considered under extreme circumstances.

Attachment B

King County Solid Waste Division 2010 Timeline for the Solid Waste Management Comprehensive Plan

Review Draft Plan	January – February 4
Revise / Update Plan	February – March
Department of Ecology Review	April – May
Finalize Plan	June
Release Final Draft Plan	July
Adopt Plan	August – November
Final Draft of Ecology	December

FORWARD

This preliminary *Draft 2009 Comprehensive Solid Waste Management Plan* (the plan) presents proposed strategies for managing King County's solid waste over the next 6 years, with consideration of the next 20 years. The plan was prepared by the Solid Waste Division (the division) of the Department of Natural Resources and Parks in accordance with Washington state law Revised Code of Washington (RCW) 70.95.

The division is seeking comments on this preliminary draft. Copies of the plan have been provided to King County cities, Unincorporated Area Councils, and the King County Council and will be available for public review at all King County libraries. The plan is also available on the division's Web site at *www.kingcounty.gov/SWDCompPlan* for review by the public and other stakeholders. Beginning October 8, 2009, the division will be taking comments on the plan via e-mail, letter, or a comment form available at libraries and on the Web site. The comment period extends through February 4, 2010. Comments by e-mail can be sent to *CSWMP.Comments@kingcounty.gov*. Letters should be addressed to:

2009 Draft Solid Waste Plan Comments
King County Solid Waste Division
201 S. Jackson St., Suite 701
Seattle, WA 98104-3855

State law delegates authority to the county to prepare a comprehensive solid waste management plan in cooperation with the cities within its boundaries. An Interlocal Agreement (ILA) is required for any city participating in a joint city-county plan (RCW 70.95.080(2)). This plan was prepared in cooperation with 37 King County cities with which the county has ILAs (all cities in the county except for Seattle and Milton). Participants in development of the plan included the division's two advisory committees – the Solid Waste Advisory Committee and the Metropolitan Solid Waste Management Advisory Committee. The planning process is discussed in more detail in Chapter 2, *Solid Waste System Planning*.

The plan builds upon the 2006 *Solid Waste Transfer and Waste Management Plan* that was approved by the King County Council in December 2007. The plan presents draft policies, recommendations, and goals in the following areas: solid waste system planning, waste prevention and recycling, collection and processing, the transfer system, solid waste disposal and landfill management, and system financing. A cost assessment, as required by the Washington Utilities and Transportation Commission (WUTC), is provided in Appendix A.

A final draft plan will be released after consideration of comments, preliminary review by the Washington State Department of Ecology (Ecology), review by the WUTC, and completion of an environmental review under the State Environmental Policy Act (SEPA) requirements. The final draft plan must be adopted by:

- Cities representing three-quarters of the total population of the cities that act on the plan during the 120-day adoption period
- The Regional Policy Committee acting as the Solid Waste Interlocal Forum
- The King County Council

After adoption and completion of SEPA review, the final draft plan will be submitted to Ecology. The draft plan becomes final upon approval by Ecology.

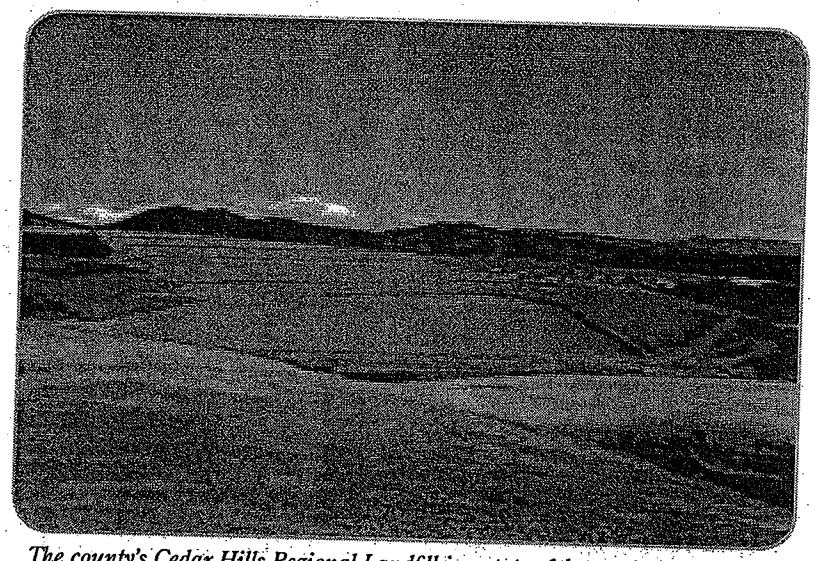
Draft schedule for plan completion

October 8, 2009	Release preliminary draft plan
October 8, 2009 – February 4, 2010	Preliminary draft review and comment period
Dates to be determined (tbd)	Revise preliminary draft to incorporate comments
Dates tbd – up to 120 days	Ecology review of preliminary draft
Dates tbd	Revise preliminary draft to incorporate Ecology's comments
Date tbd	Release final draft
Dates tbd – 120-day period	City adoption process
Dates tbd	Regional Policy Committee adoption process
Dates tbd	King County Council adoption process
Date tbd	Submit final draft to Ecology
Dates tbd – up to 45 days after final draft submittal	Ecology approval period

INTRODUCTION

The last few decades have brought about significant developments in the management of solid waste – stemming not only from advances in technology and the changing marketplace, but from a widespread recognition of the pivotal role of waste prevention, resource conservation, and environmental protection.

Since its inception in the 1960s, the core mission of the King County Solid Waste Division (the division) has been to ensure that citizens in the county have access to safe, reliable, efficient, and affordable solid waste handling and disposal services. Over the last 20 years, that mission has expanded to integrate the principles of environmental stewardship and sustainable development into every aspect of solid waste management.



The county's Cedar Hills Regional Landfill is a state-of-the-art facility that meets the highest standards for protection of human health and the environment.

This preliminary *Draft 2009 Comprehensive Solid Waste Management Plan* builds upon those principles in our facility designs, operations, and programs for the future. This is also the first King County solid waste plan to look at ways to address climate change – one of the nation's leading environmental concerns (see page 1-5).

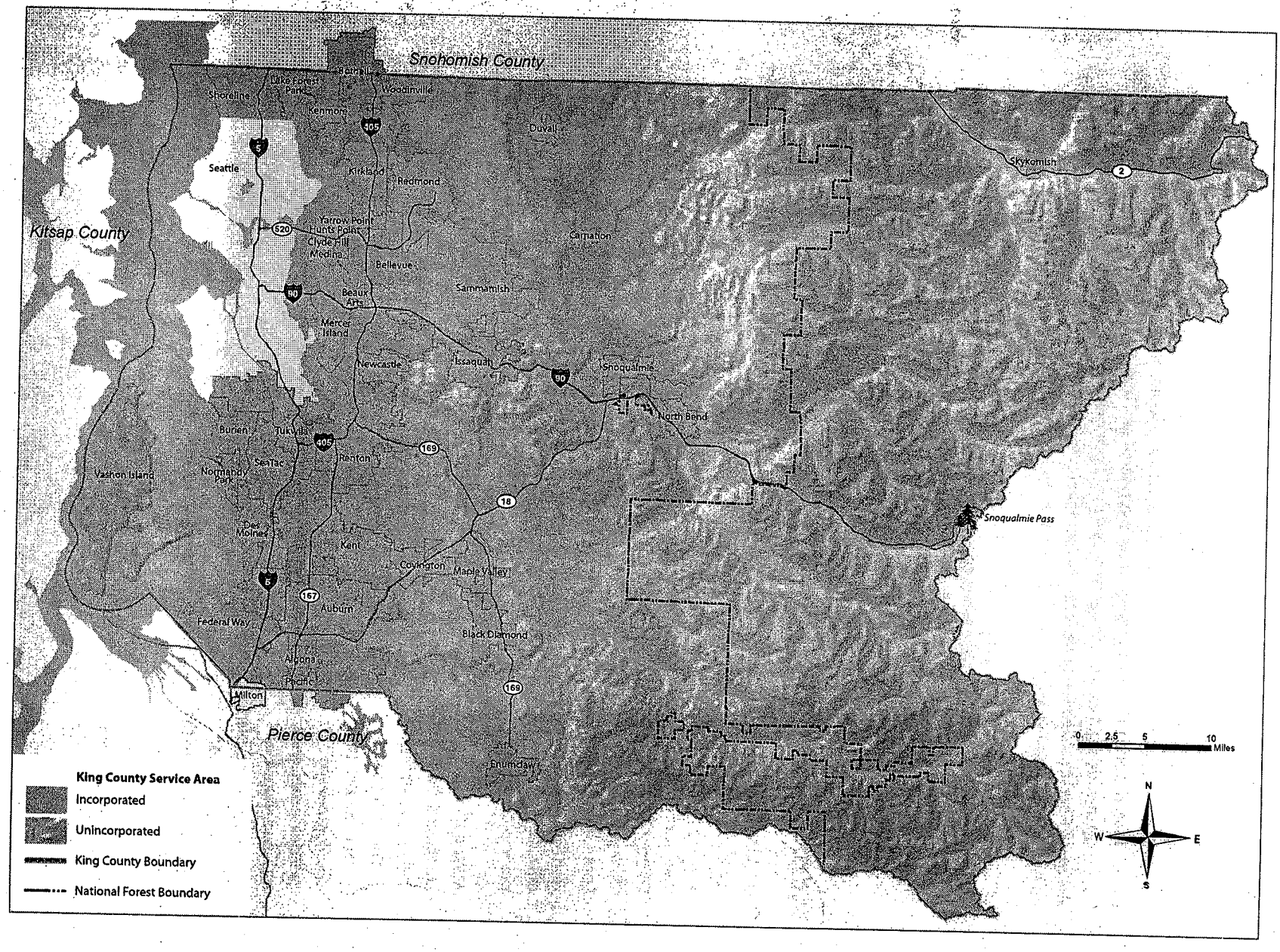
The King County solid waste system comprises 37 of the 39 cities in the county (including all but the cities of Seattle and Milton) and the unincorporated areas of King County. In all, the county's service area, shown in Figure 1-1, covers approximately 2,050 square miles. There are about 1.3 million residents and 690,000 people employed in the service area.

Over time, the management of solid waste has evolved from a relatively simple system of garbage collection and disposal to a much more complex network of collection, transportation, and processing for garbage, recyclables, organics (yard wastes and food scraps), and construction and demolition debris (C&D). This integrated network combines the infrastructure and services of both the public and private sectors to provide long-term capacity for solid waste management in the region.

Through this system, in 2007 about 1 million tons of garbage was disposed at the county-owned Cedar Hills Regional Landfill. In addition, more than 900,000 tons of materials was recycled or composted, and about 132,000 tons of C&D was recycled or reused. Studies show that even more can be done to reduce disposal through waste prevention, reuse, and recycling.


First left
RECYCLE
• Cardboard
• Mixed paper
• Newspaper
• Aluminum
• Tin cans
• Plastic bottles
• Glass bottles
• Textiles
Inside station
RECYCLE
• Yard waste
• Clean wood
• Appliances
• Scrap metal
1
Introduction

Figure 1-1. King County service area

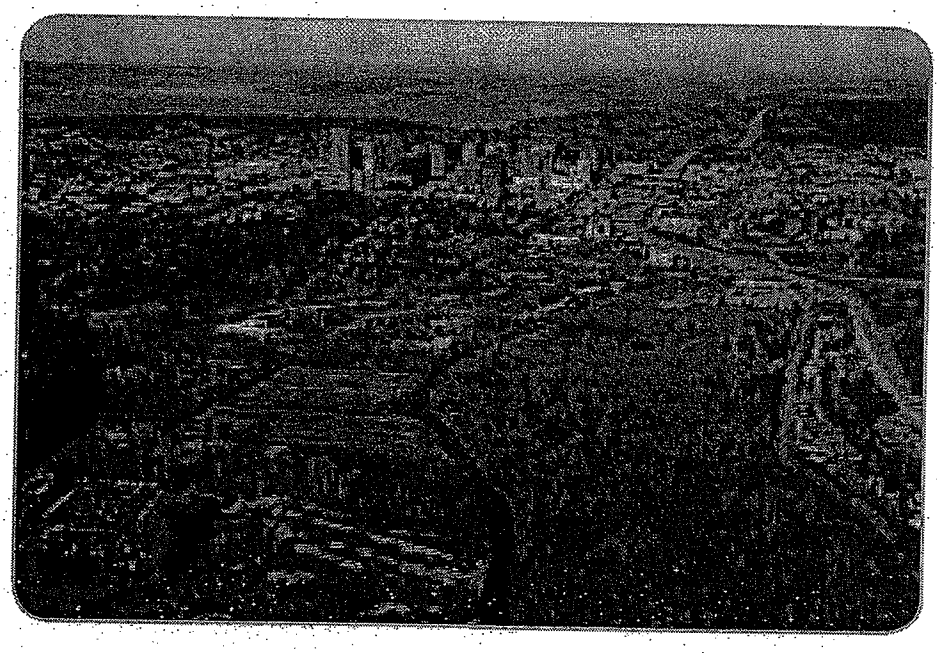


With this plan, the division is building upon past and current efforts to increase waste prevention and recycling (WPR) and advance green building practices in the region's communities and within our own operations. We continue to refine operational practices and facility designs in ways that further reduce our carbon footprint and promote the greening of our natural and built environments. All of the participants in the countywide solid waste management system – from the 37 cities within the county's borders to the private-sector collection and processing companies to the individual businesses and residents – are contributing to these vital efforts in their own operations and practices.

A number of milestones have been achieved since the county published its last comprehensive solid waste management plan in 2001. These achievements are exemplified in current programs, facility designs, and operational practices and reflect the broader mission of solid waste management in the region. The following sections briefly summarize key accomplishments and the future direction of solid waste management within each aspect of our operations.

TAKING A REGIONAL APPROACH TO SYSTEM PLANNING

In 2004, the King County Council adopted Ordinance 14971 to establish a process for the 37 cities in the county's service area to collaborate with the division in the early stages of long-term planning and policy development. It set the stage for creation of the Metropolitan Solid Waste Management Advisory Committee (MSWMAC), which consists of elected officials and staff from participating cities.



MSWMAC and the long-standing Solid Waste Advisory Committee (SWAC) have been instrumental in the development of policies, goals, and recommendations presented in this plan. SWAC has been an advisory group to the division since 1985, with a membership that includes King County citizens and representatives from public interest groups, labor, recycling businesses, the marketing sector, manufacturing, the waste management industry, and local elected office.

Beginning as early as 2005, both SWAC and MSWMAC have been meeting with the division to create the building blocks that would form the basis for this plan. Collaborative efforts that have helped shape the plan include:

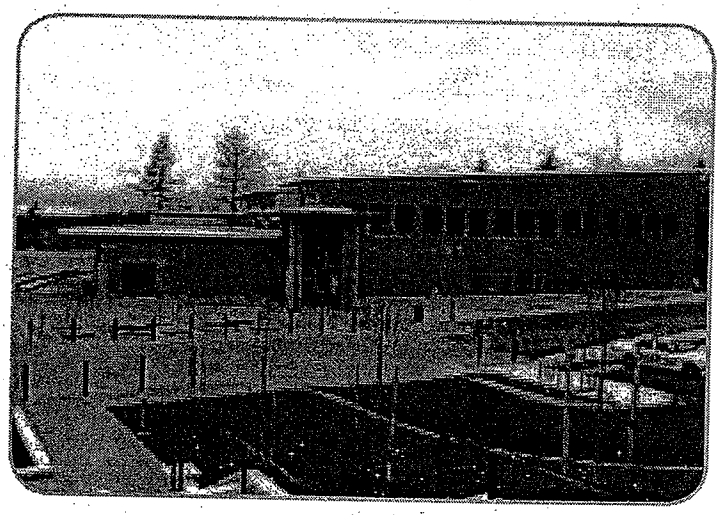
- Establishing progressive goals for WPR that will further reduce solid waste disposal over the next 10 years
- Conducting in-depth analyses and evaluations of the solid waste transfer system that resulted in the development and adoption of a major renovation plan for the transfer system network
- Evaluating strategies for extending the life of the Cedar Hills Regional Landfill and beginning to explore viable options for future waste disposal once the landfill closes

Joint planning with SWAC and MSWMAC has proven to be a highly effective tool for achieving regional consensus on solutions to the challenges facing the region's solid waste system in the future.

LEADING THE WAY IN WASTE PREVENTION, RECYCLING, AND PRODUCT STEWARDSHIP

King County continues to gain distinction as a leader in WPR. Together, the division and the cities work with the area collection and processing companies and local, state, and national businesses and organizations to develop the innovative programs and services that give the county its leading edge. Some key program developments include:

- The addition of new recyclable materials for collection at the curb and at division transfer stations
- Growing markets for a wider array of materials for recycling and reuse
- Successful promotions that encourage waste prevention
- An increase in product stewardship, whereby manufacturers and retailers are assuming responsibility for recycling the products they produce or sell through take-back programs at selected collection sites across the region
- Advancements in the green building industry, including a focus on creating sustainable housing in affordable communities



With technical and financial assistance from the division's green building program, the City of Sammamish built a new city hall that showcases environmentally sustainable building and construction.

County Climate Teams Tackle Climate Change

Climate change refers to changes in the long-term trends in average weather patterns of a region, including the frequency, duration, and intensity of wind and snow storms, cold weather and heat waves, drought, and flooding. Climate change is attributed primarily to the emission of greenhouse gases, including such compounds as carbon dioxide and methane.

Proper solid waste management plays a significant role in reducing greenhouse gas emissions. That role has been recognized by both state and local governments in Washington. In 2004, the Washington State Department of Ecology (Ecology) issued its Beyond Waste plan (Ecology 2004), which presents a long-term strategy for systematically eliminating wastes and the use of toxic substances. It includes initiatives that focus on expanding the recycling of organic materials and advancing green building practices. In turn King County issued a 2006 Executive Order and subsequent *2007 King County Climate Plan* (King County 2007) that looks at the role of county government at its many levels of operation. The county's climate plan sets a target of reducing overall greenhouse gas emissions in county operations by 80 percent below 2007 levels by the year 2050. Goals in the plan include the development and use of waste-to-energy technologies, waste prevention, and the use of climate-friendly materials.

To develop comprehensive strategies and goals for addressing climate change, climate teams are forming at all levels of county government from the Executive's office to individual departments and divisions. The Solid Waste Division Climate Team has been formed to coordinate efforts that have already begun throughout the division and to establish goals and strategies for future efforts. The division is also tracking and reporting its progress to the Department of Natural Resources and Parks Climate Team to support department and countywide goals.

Throughout this plan, we have noted current or planned changes in facility designs, operations, and programs that take into account how we might reduce our effects on the climate and adapt to changes that do occur. There are three primary methods for reducing those effects:

- **Mitigation** – directly or indirectly reducing emissions. Examples include reducing energy use at division facilities, reducing fuel use, using hybrid vehicles and alternative fuels (such as biodiesel), and promoting WPR to reduce the mining of virgin resources and emissions from manufacturing and processing activities. Another example is the conversion of gas collected at the county's Cedar Hills Regional Landfill into pipeline-quality natural gas for use in the region's power grid – which replaces the use of natural gas from a non-renewable source.
- **Adaptation** – modifying facilities and operations to address the effects of climate change. Examples include modifying facility designs to adapt to more severe weather systems (e.g., constructing roof structures designed to handle greater snow loads), using more drought-tolerant plants in facility landscapes, and identifying alternate transportation routes to avoid areas where there may be an increase in seasonal flooding.
- **Sequestration** – removing carbon dioxide from the atmosphere and depositing it back into natural "sinks," such as plants and soils. Examples include planting more trees around facilities to remove carbon dioxide through photosynthesis and using compost to replenish depleted soils and promote plant growth.

Powered by solar panels, weather stations provide data to support environmental monitoring and maintenance at several division facilities.

- An increase in organizations that accept materials for reuse, such as clothing and textiles, usable food supplies, and reusable building materials

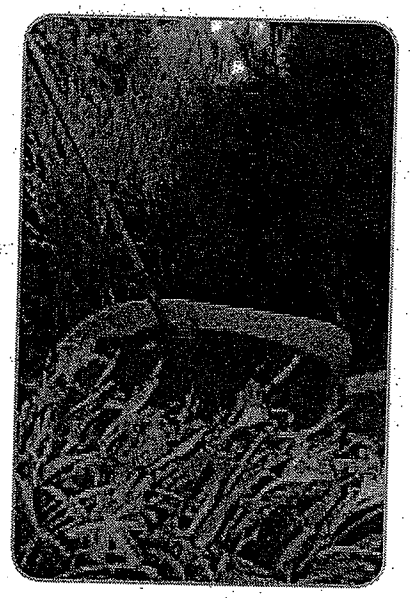
With this plan, the division and its advisory committees have set goals to step up regional efforts to reduce, reuse, and recycle by focusing on specific waste generators and particular materials or products that remain prevalent in the waste stream.

The new process for recycling electronic wastes exemplifies the results that can be achieved when area manufacturers, retailers, and local governments work together on a major initiative. State legislation was passed in 2006 that requires manufacturers of computers, monitors, and televisions – referred to as e-waste – to provide for the recycling of these products beginning in January 2009. As a member of the Northwest Product Stewardship Council, the division helped draft the model legislation that led to formation of the E-Cycle Washington program, which implements this recycling service at no cost for Washington residents, small businesses, local governments, nonprofit organizations, and school districts. The division assisted businesses throughout the county in becoming authorized e-waste collection sites. Between January and May 2009, nearly 15 million pounds of e-waste was received at 35 collection locations in King County and more than 220 locations statewide.

EXPANDING THE COLLECTION OF RECYCLABLE AND COMPOSTABLE MATERIALS

An advancement in the collection of curbside recyclables has been the transition to commingled (or single-stream) collection. With this system, all recyclables can be placed in a single, wheeled cart rather than the smaller, separate bins often used in the past. The single cart system not only makes recycling easier and more convenient for the customer, it is more efficient for the companies that provide collection service.

The division and the cities have worked with the collection companies to phase in curbside collection of food scraps and food-soiled paper in the yard waste container. In the past, food scraps and food-soiled paper made up about one-third of the total waste stream for disposal. Currently, nearly all single-family curbside collection customers have access to food scrap collection, and the number of households using the service is increasing. The combined food scraps and yard waste (organics) are taken to processing facilities that turn the materials into nutrient-rich compost used to enrich soils.



Processed organics make it back to consumers as finished compost to enrich soils in local yards and gardens.

BUILDING A NEW GENERATION OF TRANSFER STATIONS

With the approval by King County Council of the 2006 *Solid Waste Transfer and Waste Management Plan*, the division has been moving forward on the renovation of the division's urban transfer system to update station technology and incorporate green building features, increased recycling services, and operational

efficiencies. Because many of the urban stations are operating beyond capacity due to steady increases in the region's population over the years, stations are also being expanded to add capacity for both garbage and recyclables. Renovations planned for each station include design features that reduce water and energy use, designated areas for the collection of a wider array of recyclables, and the installation of solid waste compactors. By compacting the garbage prior to transport to the landfill, fewer trucks are required to haul the same amount of garbage and truck trips are reduced.

A ribbon-cutting ceremony marks the opening of the new Shoreline Recycling and Transfer Station.

In 2008, the division opened the first of five new state-of-the-art transfer stations – the Shoreline Recycling and Transfer Station. The station has exceeded all expectations for environmental excellence with its innovative design and green building features. It received the highest possible honor from the U.S. Green Building Council with a Leadership in Energy and Environmental Design (LEED) platinum certification. The station has also been the recipient of nearly 10 recognition awards from national, regional, and local organizations, including the Solid Waste Association of North America, the American Institute of Architects, the American Public Works Association, and the Northwest Construction Consumer Council.

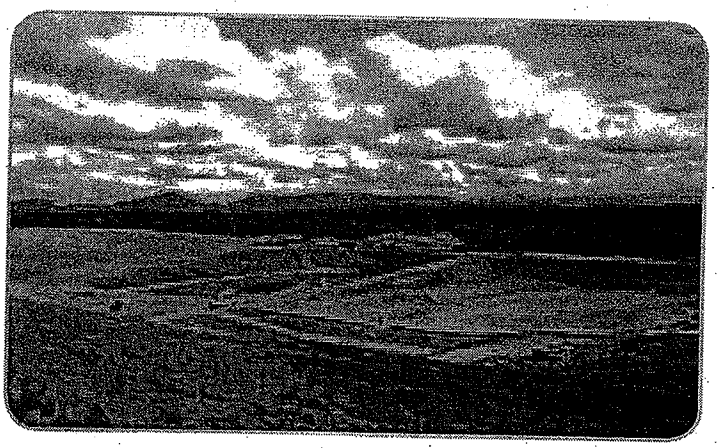
Public involvement was a crucial component of the successful design and construction of the Shoreline station. Throughout the process, the division worked closely with the City of Shoreline, neighboring communities, environmental groups, and local businesses and citizens to obtain their input on the project. A Citizens Advisory Committee began meeting with the division in 2002 to review the master plan for the facility prior to final design and construction. The division was also awarded a certificate of appreciation by the Thornton Creek Alliance for working with local residents and alliance members to ensure that improvements at the site would help restore and enhance Thornton Creek, which runs across the property.

The facility design and public process for the Shoreline station have set the bar for the four other stations approved for construction during this planning period, reflecting –

- How we approach the planning process – incorporating early community involvement
- How we build them – using the greenest elements possible
- How we operate them – pursuing operational efficiencies that reduce fuel, energy, and water use and increasing recycling opportunities

MANAGING SOLID WASTE DISPOSAL WITH AN EYE TOWARD THE FUTURE

The Cedar Hills Regional Landfill is the only landfill still operating in King County. Because use of the county landfill is currently the most economical method for disposal of the region's wastes, the division is exploring all viable options for extending its useful life as long as feasible. This strategy, recommended in the division's 2006 *Solid Waste Transfer and Waste Management Plan*, was approved by the King County Council in 2007. In-depth alternatives for extending the life of the landfill beyond the current projection of 2018 are being explored in the update of the Cedar Hills Regional Landfill Site Development Plan, which is being developed concurrently with this plan.



The landfill has been developed in sequential stages (or refuse areas), with construction of Area 7 currently in progress.

The 2001 comprehensive solid waste management plan directed the division to "contract for long-term disposal at an out-of-county landfill" once Cedar Hills reaches capacity and closes. With this plan, the division has proposed eliminating this policy in favor of exploring a range of options for future disposal, such as waste-to-energy and other conversion technologies, in addition to waste export to an out-of-county landfill. Currently emerging technologies for converting solid waste to energy or other reusable resources, such as liquid fuels or compost, are in various stages of development and testing in U.S. and international markets. Some of the technologies are capable of processing the entire solid waste stream, while others target specific components, such as plastics or organics. As the timeframe for landfill closure approaches, the division will continue to monitor both landfill capacity and advancements in waste conversion technologies.

Continued use of the landfill will delay the transition to a new disposal method, thereby delaying the rate increase needed to make this significant transition. Consistent with this strategy, the division also plans to evaluate the feasibility of diverting a portion of the waste stream from Cedar Hills to another disposal option before the landfill reaches capacity and closes. Partial early waste diversion would further extend the life of the landfill and provide an opportunity to assess disposal options, such as waste conversion technologies, before it is necessary to select a new disposal method.

FINANCING SOLID WASTE OPERATION FOR THE LONG-TERM

Solid waste fees in King County remain among the lowest in the region. Even as the division embarks on a major facility renovation plan, keeping fees low and stable are fundamental objectives.

Since late 2007, the division has seen unanticipated reductions in garbage tons received and corresponding revenues due to the effects of the global economic downturn. The division is responding to this economic trend by adjusting expenditures as necessary.

While division revenues rely primarily on fees for garbage disposal, the current priorities are to increase recycling and prevent waste generation. Reductions in tonnage due to WPR have been gradual, and the system has adjusted accordingly. Further reductions will continue to affect the revenues of King County and solid waste operations in other jurisdictions throughout the state. The division is participating in discussions at the state level to explore funding structures for financing solid waste disposal that "reinforce rather that work against" WPR efforts. To help offset reductions in solid waste tonnage, the division has begun to identify new revenue sources, such as the sale of landfill gas from the Cedar Hills landfill (discussed below) and greenhouse gas offsets from this and other potential sources.

PROTECTING NATURAL RESOURCES THROUGH ENVIRONMENTAL STEWARDSHIP

Environmental stewardship incorporates a long-term mission to manage our natural resources so they are available for future generations. It also involves taking responsibility – as individuals, employees, business owners, manufacturers, and governments – for the protection of public health and the environment.

Building an environmentally sustainable solid waste management system in King County takes a coordinated, regionwide effort. The division, the cities, and the collection and processing companies in the region are making concerted efforts to help make this happen.

WPR is just one of the ways in which the division and others are working to reduce wastes, conserve resources, and protect the environment. Other well-established programs and innovations that support environmental stewardship are discussed in the following sections.

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

Turning Landfill Gas Into Green Energy

In 2009, a new gas-to-energy facility began operating at the Cedar Hills Regional Landfill to turn landfill gas generated through the decomposition of garbage into pipeline-quality natural gas for the energy market. The gas is delivered via pipeline to Puget Sound Energy's gas-fired power plants. The facility is

expected to generate enough natural gas to supply about 24,000 homes with "green energy." The sale of gas from the landfill is expected to earn the division more than $1 million in annual revenues.

Landfill gas, composed primarily of methane, has historically been captured and burned in flares at the landfill 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, which owns and operates the facility, determined that the annual reduction in carbon dioxide from converting the landfill gas to natural gas is roughly equal to the annual carbon dioxide emissions from 22,000 average passenger cars.

Managing Illegal Dumping and Litter

Illegal dumping and litter can cause environmental contamination and pose a safety hazard. Addressing the issue of illegal dumping requires several coordinated programs and the participation of many county departments, the cities, and other agencies. The division manages or participates in programs that strive not only to reduce littering and illegal dumping on public and private property, but also to assist its victims.

The county continues to strengthen its role in enforcing laws that prohibit illegal dumping on public and private lands.

Illegal dumping

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 division continues to lead the implementation of recommendations made in 2004 by a county task force charged with strengthening and coordinating the county's response to illegal dumping reports. In 2008 the King County Council adopted an ordinance to refine the county's role in enforcing laws that prohibit illegal dumping on public and private lands.

The new ordinance 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, which enables environmental site inspectors from the county, cities, and other agencies to issue free disposal vouchers to the property owners who are victims of illegal dumping.

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).

Community Litter Cleanup

The division's Community Litter Cleanup Program, funded in part by a grant from Ecology, supports the cleanup of litter and illegal dumpsites on public lands and waterways in King County. The program also supports prevention and education, through school programs, advertising, signage, and other measures.

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

The division has expanded its efforts to discourage littering and illegal dumping through advertising and public outreach.

Secure Your Load

Each year in the U.S. nearly 25,000 accidents are caused by litter that is either intentionally dumped by motorists or that falls out of vehicles carrying unsecured loads. About 350 of those accidents occur on Washington state highways.

In 2006, the division launched the Secure Your Load outreach program to raise public awareness of the importance of securing loads when transporting materials in truck beds, in trailers, atop cars, and in open trunks. Title 10 of King County Code defines an unsecured load as "a load of solid waste that has not been securely fastened, covered, or both to prevent the covering or any part of the load from becoming loose, detached or leaving the vehicle while the vehicle is moving."

The Secure Your Load program has promoted enforcement efforts under a state law that requires vehicles carrying loads to prevent it from "dropping, sifting, leaking, or otherwise escaping" (RCW 46.61.655). King County Code (Title 10.12.040) also allows the division to charge an unsecured load fee to vehicles arriving with unsecured loads at King County transfer stations. The division has worked closely with the King County Sheriff's Office to enforce the law. As part of the program, the Sheriff's office has conducted periodic emphasis patrols around solid waste facilities.

Providing Technical Assistance for Contaminated Site Cleanup

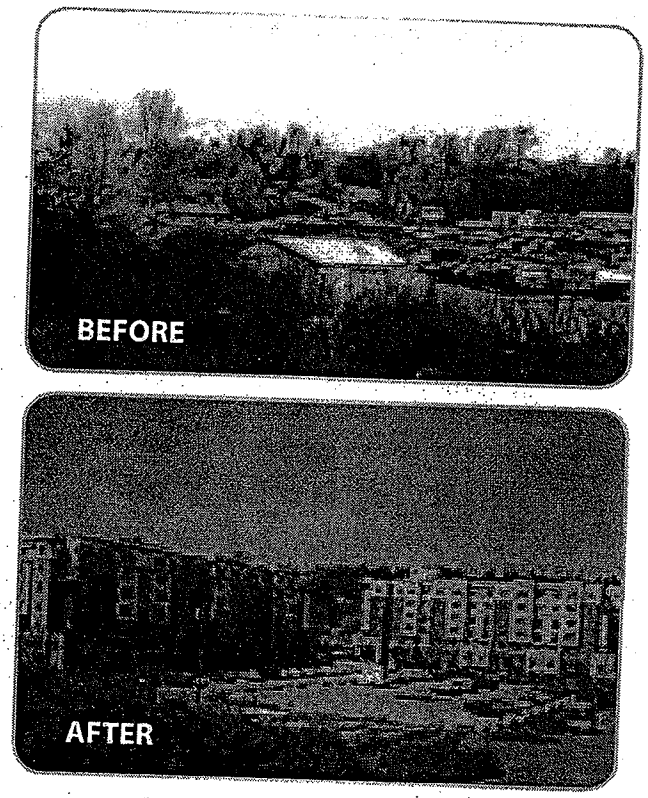
Contaminated sites can harm the environment, hinder economic development, and contribute to blight. The division manages two programs that provide assistance to businesses and public agencies, including King County, for site cleanup.

Brownfields Program

The division's Brownfields Program provides assistance to qualified private businesses and landowners, nonprofit organizations, and municipalities within King County to assess and clean up contaminated sites, also known as Brownfields. The division provides the following services:

- **Technical Assistance:** Two types of technical assistance are available to determine the extent of contamination at a site. Private individuals and businesses, municipalities, and nonprofit organizations are eligible for initial assessments that include research of past and present uses, a review of existing environmental studies, and site visits. Public and nonprofit entities are eligible for in-depth assessments that include environmental sampling and analysis. Private entities may also be eligible for this latter assistance if the end use of the site will result in a public benefit.

- **Low-Interest Loans:** In partnership with the State of Washington, the program offers low-interest loans to public, private, and nonprofit entities for cleaning up Brownfields properties.



The Brownfields program team helped clean up a contaminated site and transform the property into a residential and commercial development.

- **Grants:** The program helps public and nonprofit entities access grant funds available from the U.S. Environmental Protection Agency in amounts of up to $200,000 for environmental assessment and cleanup.

The Brownfields Program has had a number of successes. Among them a former chemical manufacturing plant at which the soil and groundwater were contaminated with petroleum, solvents, and metals. The property was cleaned up and converted to a productive business that is generating new jobs and tax revenues. Another successful cleanup effort was at a site where the soil and groundwater were contaminated with polychlorinated biphenyls, petroleum, solvents, and metals; the site has been transformed to a mixed-use housing and commercial development.

Contaminated Sites Program

Through the Contaminated Sites Program, the division provides technical advice and environmental assessment services to other county divisions and departments that own or acquire property that may be contaminated. Established under county ordinance, the program maintains a revolving fund to carry out assessments and cleanups. For example, the division provided environmental assessments for several sites that were being acquired by the Water and Land Resources Division to create green belts and other open spaces from Redmond to Black Diamond.

SUMMARY OF THE PLAN ORGANIZATION

This 2009 plan is organized to guide the reader from system planning through the major elements of solid waste management. Within each chapter are proposed King County policies that provide the overarching mission for each facet of operation from WPR to disposal and system financing. Following the policies, as appropriate, are the proposed recommendations for more specific actions to be carried out during this planning period. Beside each recommendation is a page number to indicate where more detailed discussion can be found in that chapter.

Following the table of contents is a list of acronyms, abbreviations, and common terms used throughout the plan. A list of the documents referenced in the plan is provided in a final chapter. Web site addresses are provided for documents that were prepared by or for the division.

There are two appendices provided with the plan. A cost assessment, as required by the Washington Utilities and Transportation Commission, is provided in Appendix A. The template for the existing solid waste Interlocal Agreements with the cities is provided in Appendix B.

Solid Waste Transfer System

Policies

TS-1 Provide solid waste services to commercial collection companies and self-haul customers at transfer stations, and to self-haul customers at drop boxes.

TS-2 Provide solid waste transfer services in the urban and rural areas of the county based on local and facility conditions.

TS-3 Work with cities and communities to develop mitigation measures for impacts related to the construction, operation, and maintenance of transfer facilities, as allowed by applicable local, state, and federal laws.

TS-4 Incorporate green building principles and practices in all new transfer facilities and seek a Gold or higher rating in the Leadership in Energy and Environmental Design (LEED) certification process.

TS-5 Provide for collection of recyclable materials at transfer facilities – recognizing resource limitations, availability of markets, and service area needs – focusing on maximum diversion of recyclables from the waste stream and on materials that are not easily recycled at the curb.

Landfill Management and Solid Waste Disposal

Policies

DS-1 Operate and maintain the Cedar Hills Regional Landfill to meet or exceed the highest federal, state, and local standards for protection of public health and the environment.

DS-2 Maximize the capacity and lifespan of the Cedar Hills Regional Landfill, subject to environmental constraints, relative costs to operate, and stakeholder interests.

DS-3 Monitor and maintain closed landfills to meet or exceed the highest federal, state, and local standards for protection of public health and the environment.

Solid Waste System Finance

Policies

FIN-1 Utilize the assets of the King County Solid Waste Division exclusively for the benefit of the solid waste system, and fully reimburse the solid waste system for the value associated with the use or transfer of its assets.

FIN-2 Maintain a Solid Waste Division financial forecast and cash-flow projection of three years or more.

FIN-3 Keep tipping fees as low as reasonable, while covering the costs of effectively managing the system and providing service to customers.

FIN-4 Assess fees for use of the solid waste transfer and disposal system at the point of service.

FIN-5 Determine the Basic Fee using a rate structure based on weight.

FIN-6 Charge the same Basic Fee at all transfer facilities.

FIN-7 Maintain the following reserve funds:
a. Landfill Reserve
b. Landfill Post-Closure Maintenance
c. Capital Equipment Recovery Program
d. Construction

FIN-8 Maintain the Landfill Post-Closure Maintenance Fund at a level to ensure that environmental monitoring and maintenance of the closed landfills for which the county has responsibility will be fully funded through the end of their post-closure maintenance periods, as defined by applicable law.

FIN-9 Routinely evaluate all reserve funds for long-term adequacy and set contributions to maintain reasonable rate stability.

Solid Waste System Planning

Policies

PL-1 Monitor and report the amount, composition, and source of solid waste entering the transfer and disposal system.

PL-2 Update the solid waste tonnage forecast to support short- and long-term planning and budgeting for facilities and operations.

PL-3 Monitor and report waste prevention and recycling activity, including the amount of materials recycled, programmatic achievements, and the strength of commodity markets.

PL-4 Work with the division's advisory committees, the cities, and the Solid Waste Interlocal Forum on solid waste management planning and decisions.

PL-5 Incorporate principles of equity and social justice into solid waste system planning.

PL-6 Consider climate change impacts when planning for facilities, operations, and programs.

Waste Prevention and Recycling

Policies

WPR-1	Achieve Zero Waste of Resources – to eliminate the disposal of materials with economic value – by 2030 through a combination of efforts in the following order of priority: a. Waste prevention and reuse b. Product stewardship, recycling, and composting c. Beneficial use
WPR-2	Set achievable goals for reducing waste generation and disposal, and increasing recycling and reuse.
WPR-3	Enhance, develop, and implement waste prevention and recycling programs that will increase waste diversion from disposal using a combination of tools: a. Infrastructure b. Education and promotion c. Incentives d. Mandates
WPR-4	Advocate for stewardship in the design and management of manufactured products and greater responsibility for manufacturers and retailers to divert these products from the waste stream.
WPR-5	Work with regional partners to find the highest value end uses for recycled materials and support market development.
WPR-6	Strive to ensure that materials diverted from the King County waste stream for recycling or reuse are handled and processed using methods that are protective of human health and the environment.

Collection and Processing

Policies

CP-1	Provide for efficient collection of solid waste, recyclables, and organics, while protecting public health and the environment and maximizing the diversion of recyclables and organics from disposal.
CP-2	Promote efficient collection and processing systems that work together to minimize contamination and residual waste, and maximize diversion from disposal.