King County Solid Waste Division

Comprehensive Solid Waste Management Plan Preliminary Draft

June 2026

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List of Common Terms

[To be populated at a later date]

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Chapter 1 – Introduction

[PLACEHOLDER – This chapter is about how the Comp Plan was developed and adopted. The rest of this chapter will be available at a later date.]

Plan Amendments

Amendments to the Comprehensive Plan (Comp Plan) are considered minor changes that do not change the goals and priorities of the plan. These types of changes could include:

- Changes to designated recycling lists
- Adjustments to construction schedules
- Modifying actions that bring division programs into compliance with new laws

Substantive changes to the Comp Plan—ones that do change the goals, priorities, and direction of the division—must be made through a revision process and cannot be proposed as an amendment. Examples of substantive changes include:

- Adding plans to build a new transfer facility
- Moving the Zero Waste of Resources Goal target date
- Shifting policy focus from maximizing waste diversion to maximizing waste generation

Amendments can be proposed through a written request by the County, the Solid Waste Division's (SWD) Interlocal Agreement (ILA) partners, and/or its advisory committees once per year before the end of a Comp Plan's five-year period.

Once the amendment proposal is received by the Comp Plan Program Manager, it will be shared with the division's two advisory committees—Metropolitan Solid Waste Advisory Committee (MSWAC) and Solid Waste Advisory Committee (SWAC)—all ILA cities, and the public. The process for formally adopting the amendment is as follows:

- MSWAC and SWAC will each hold two successive meetings to discuss the proposed amendment. The first meeting will include a dedicated allotment for public comment. Committees during the second meeting will determine the recommendation on the proposal.
- The division and the Department of Natural Resources and Parks (DNRP) will send amendment proposal and recommendations to the Executive. The Executive can either reject or approve.
- Upon approval, the Executive will transmit the amendment proposal to Council.
- If the Council adopts the amendment by ordinance, SWD will notify the Department of Ecology (Ecology) within 45 days of adoption.

The Comp Plan amendment process is not currently included in the ILAs of the cities within the division's service area. With the adoption of this Comp Plan, the ILAs must be updated with new language to reflect this process and document requirements of cities to advance proposed amendments.

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Chapter 2 – The Existing Solid Waste System

Policies

ES-1	Maintain a public and private mix of solid waste transfer and processing facilities.
ES-2	Work with the division's advisory committees, the cities, community members, and the Solid Waste Interlocal Forum on solid waste management planning and decisions.
ES-3	Incorporate principles of equity and social justice into solid waste system planning and delivery of services, programs, and policies.
ES-4	Factor and incorporate climate change impacts and sustainability when planning for facilities, operations, and programs.

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The Existing Solid Waste System

The solid waste management system has evolved from a relatively basic system of garbage collection and disposal to a much more complex network of collection, sorting, salvage, reuse, recycling, composting, and disposal managed by King County, area cities, and private-sector collection and processing companies. Initial improvements to solid waste facilities and operations have been developed further to incorporate waste prevention and recycling programs that strive to balance resource use and conservation with production and consumption.

One of the early influences in the evolution of the system was sweeping environmental legislation of the 1960s and 1970s, beginning in 1965 with the federal Solid Waste Management Act, which established strict regulatory standards for landfills and other solid waste facilities. Washington State subsequently passed its own waste management act, codified in Revised Code of Washington (RCW) 70.95, and established Minimum Functional Standards for Solid Waste Handling in the Washington Administrative Code(WAC) 173-304. In 1976, the federal Resource Conservation and Recovery Act set even more stringent standards for environmental protection, including requirements for the use of impermeable bottom liners and daily cover at landfills. In response to the more stringent regulations, the County began closing the unlined community landfills across the region, replacing many of them with the more environmentally protective and geographically dispersed transfer facilities that are still in operation today. With the development of the transfer network (eight transfer stations and two drop boxes) and technological advances at the County-owned Cedar Hills Regional Landfill (Cedar Hills), division facilities and operations were brought into compliance with the new environmental standards, and a safe, efficient, and sustainable system of solid waste management was created. The standards have continued to evolve over time, and transfer facilities and landfills now operate in accordance with the Solid Waste Handling Standards (WAC 173-350) and Criteria for Municipal Solid Waste Landfills (WAC 173-351).

Thirty-seven of the 39 cities in King County (all but the cities of Seattle and Milton) and the unincorporated areas of King County participate in the solid waste system. In all, the County's service area, shown in Figure 2-1, covers approximately 2,050 square miles. In 2024 there were 1.6 million residents and about 939,000 people employed in the service area, disposing of close to 840,000 tons of garbage at Cedar Hills. Studies show that even more can be done to reduce disposal through waste prevention, reuse, and recycling.

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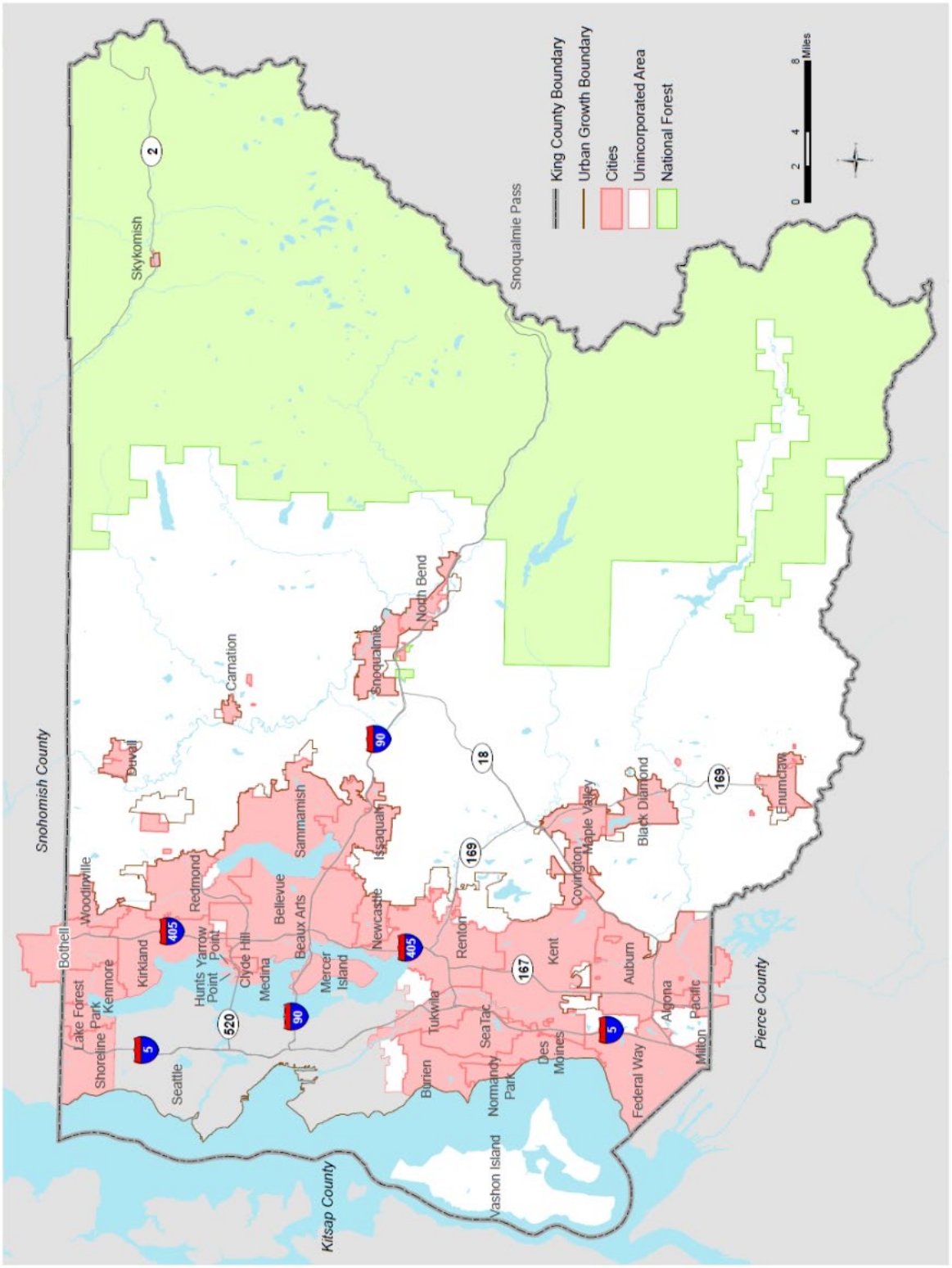
Figure 2-1. Map of King County Service Area with city boundaries, unincorporated areas, National Forest land, and Urban Growth Boundary

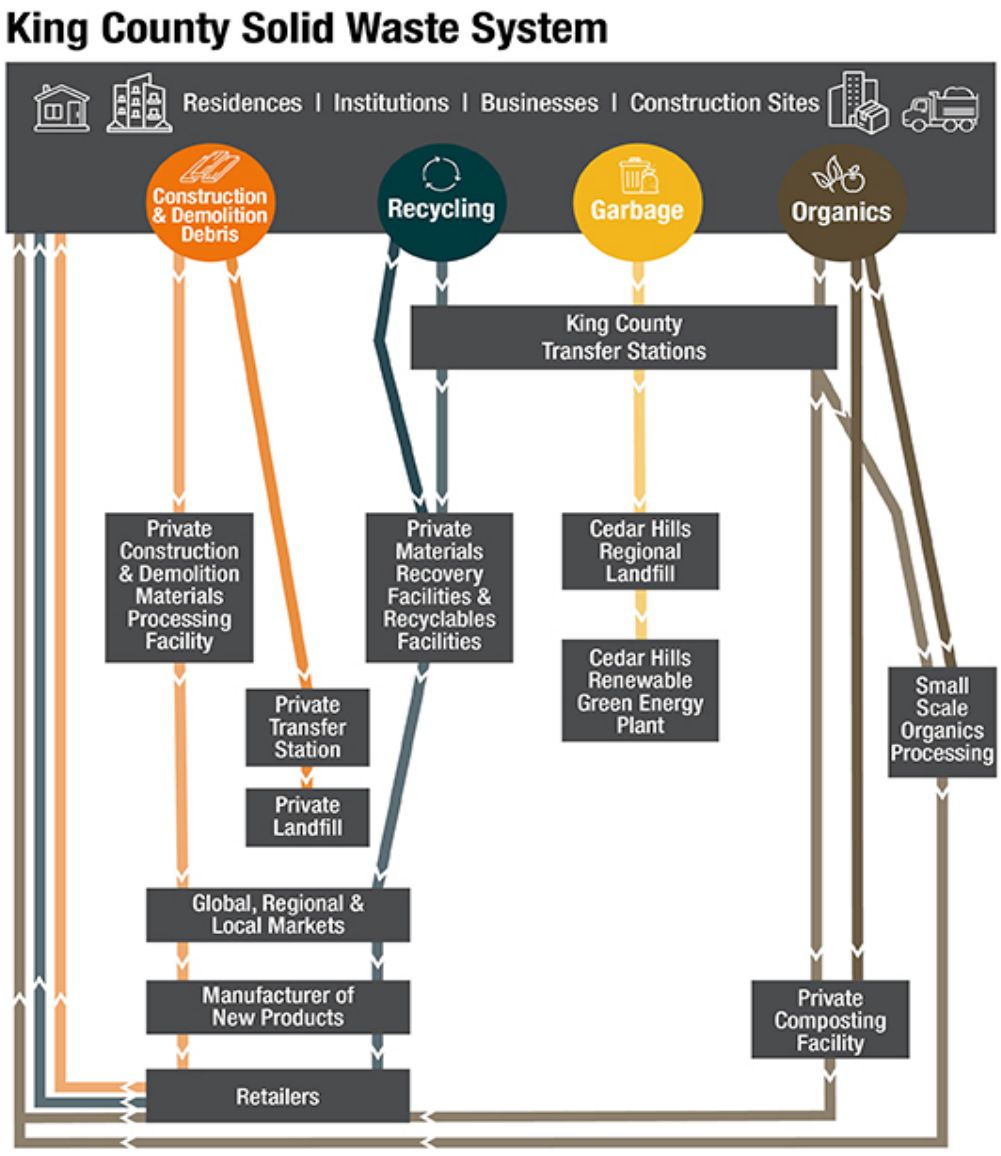


The Solid Waste System

Figure 2-2 provides a general overview of the collection, transfer, transportation, processing, and disposal systems for garbage, recyclables, organics, and construction and demolition debris. Garbage is transported to Cedar Hills for disposal, while recyclables, organics, and most construction and demolition materials are taken directly to processing or compost facilities where materials are prepared for sale to manufacturers and other users. As shown, these recycled or composted products eventually return to the market for consumer purchase.

As can be seen in Figure 2-2, this multifaceted system uses the combined resources of the public and private sectors. Regulations and systems for collection, transfer, transport, processing, and disposal that come into play are complex, involving state, county, city, and private-sector responsibilities.

Figure 2-2. The Solid Waste System



Collection of Solid Waste and Recyclables

In accordance with state law RCW 81.77.020 and 36.58.040, counties are prohibited from providing curbside garbage collection services. Legal authority for regulating collection is shared primarily between the state—acting through the Washington Utilities and Transportation Commission (UTC)—and the cities. The UTC sets and adjusts rates and requires compliance with the state and local adopted solid waste management plans and related ordinances. RCW 81.77 also includes a process for allowing cities to opt out of the UTC regulatory structure and either contract directly for solid waste collection or provide city-operated collection systems.

The County's 2001 *Comprehensive Solid Waste Management Plan* (2001 Plan) specifies that recycling should be included as part of the basic garbage rate for residents in most of King County. King County enacted a service-level ordinance, King County Code (KCC) 10.18, that includes this requirement for unincorporated areas, except Vashon Island, Skykomish, and Snoqualmie Pass. The UTC then required collection companies to develop tariffs that spread the cost and availability of recycling to all residential garbage customers. These tariffs and service-level requirements also apply to cities that have not opted out of the UTC regulatory structure.

Most of the garbage, recyclables, and organics collection in the County's service area are provided by four private-sector companies – Recology CleanScapes, Inc., Republic Services, Inc., Waste Connections, Inc., and WM, Inc. Except for Recology CleanScapes, which only provides contracted services, these companies operate both through the UTC and service contracts with individual cities. Most of the 37 cities in the service area contract directly with one or more of these private companies for collection services. Seven cities (Beaux Arts, Black Diamond, Hunts Point, Kenmore, Medina, Woodinville, and Yarrow Point) and all the unincorporated areas receive collections services from these private companies operated under certificates issued by the UTC. Two cities (Enumclaw and Skykomish) provide municipal collection services within their own jurisdictions. Enumclaw collects garbage, recyclables, and organics; Skykomish collects only garbage.

There is a fundamental difference in how the UTC regulates residential and nonresidential collection of recyclable materials. The Federal Aviation Administration Authorization Act of 1994 prohibits regulation of price, route, or service of any motor carrier transporting property. While this provision does not apply to collection of garbage and recyclable materials from residents, recyclable materials generated by the nonresidential sector are considered to be property and are subject to a different regulatory structure. King County cannot enact ordinances that require commercial garbage collectors to include recyclables collection as part of the nonresidential collection service. Cities, on the other hand, may include recyclables collection as part of their nonresidential collection service, but cannot prohibit businesses and other nonresidential entities from choosing other vendors for this service.

Revenue Sharing Provides Incentive for Collection Companies to Enhance Recycling

In 2010, the state legislature amended statute RCW 81.77.185, allowing solid waste collection companies regulated by the UTC to retain up to 50% of the revenue paid to them for the recycled materials they collect from households; the statute does not apply to collection in cities with contracts for recyclables collection. The purpose of the statute is to provide collection companies with a financial

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incentive to enhance their recycling programs. Formerly, all revenues from the sale of residential recyclables were passed back to the households as a credit on their garbage bills.

To qualify for revenue sharing, collection companies must submit a plan to the UTC that has been certified by King County as consistent with the current Comp Plan. The SWD Director has authority to make this certification.

To qualify for certification, the collection company's plan must:

- Be submitted on a two-year cycle with a mid-plan review
- Be submitted to SWD with sufficient time to review prior to UTC deadlines
- Include reporting cycles to King County and the UTC
- Demonstrate how proposed program enhancements will be effective in increasing the quantity and quality of materials collected
- Demonstrate consistency with the minimum collection standards
- Incorporate input from SWD.

Since January 2013, all UTC-regulated areas of King County, except Vashon/Maury Island, have certified revenue-sharing agreements in place.

SWD also works closely with these haulers on planning, implementation, data tracking, and ongoing technical assistance to ensure that proposed enhancements meet regional performance expectations.

Revenue-sharing agreements are expected to disappear as the Recycling Reform Act (Extended Producer Responsibility Program for Packaging and Paper Products) is implemented, beginning in 2030. Under the program, producers are responsible for education and outreach related to residential recycling.

Curbside Collection in Rural Areas

When curbside recycling was initiated in King County in the early 1990s, the collection companies serving unincorporated areas and operating under UTC certificates were required to provide curbside recycling services as specified in KCC 10.18 for most of the county. These requirements, consistent with the 1989 Comprehensive Solid Waste Management Plan, stated that curbside recycling would be offered to all households as part of the basic garbage service and that yard waste service would be available to all households as a subscription service. However, some rural areas were exempted from these requirements because their low population density or lack of participation in garbage collection services suggested that curbside recycling might not be cost effective.

Currently, three unincorporated areas are not included in the County's collection service-level standards, as specified in KCC 10.18:

Vashon/Maury Island – Historically, a comparatively high percentage of Vashon/Maury Island residents have chosen to self-haul garbage and recyclables to the division's Vashon Recycling and Transfer Station; however, the number of households subscribing to garbage service has increased over time. Waste Connections, Inc., the company providing garbage collection service on Vashon/Maury Island, also offers subscriptions to recyclables collection services. From a survey of island residents, about 62.5% currently subscribe to curbside recycling services (King County Solid Waste Division 2016). Organics curbside collection is not available.

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Skykomish Area – The area around Skykomish is remote and sparsely populated. Residents of Skykomish and some residents in surrounding unincorporated areas receive curbside garbage collection service from the Town of Skykomish. Skykomish does not collect curbside recyclables or organics. Customers may self-haul garbage and recyclables to the division's drop box facility located in Skykomish; however, separate organics collection is not provided at the facility.

Snoqualmie Pass – The Snoqualmie Pass area is also very sparsely populated. Residential garbage collection is available from WM, Inc., of Ellensburg in Kittitas County. Curbside recycling is not available; however, the division does provide a site with collection bins for the standard curbside recyclable materials. Organics collection is not available.

Transfer

The division operates eight transfer stations and two rural drop boxes in the urban and rural areas of the county (Figure 2-3). In addition to meeting standards for the safe and environmentally sound transfer of solid waste, the transfer network reduces the amount of truck traffic on the highways by providing geographically dispersed stations where garbage collected throughout the region can be consolidated into fewer loads for transport to the landfill. Transfer facilities are the public face of the solid waste system. In 2024, County transfer facilities received about 829,100 tons of garbage and recyclables, through more than 863,200 customer visits.

Garbage and, at most facilities, recyclable materials from business and residential self-haulers are accepted at the transfer station and drop box facilities. The transfer stations also provide accessible drop-off locations for garbage picked up at the curb by the commercial collection companies. From these geographically dispersed transfer stations, garbage is consolidated in transfer trailers and taken to the County-owned Cedar Hills Regional Landfill in the Maple Valley area. Recyclable materials are transported to processing facilities throughout the region.

Public Health – Seattle & King County (Public Health) is the primary regulatory and enforcement agency responsible for issuing operating permits for both public and private solid waste handling facilities. This includes solid waste, recycling, and composting facilities. Solid waste handling regulations are codified in the Code of the King County Board of Health, Title 10. The permitting process is the vehicle by which Public Health enforces the state's Solid Waste Handling Standards (WAC 173-350) and Criteria for Municipal Solid Waste Landfills (WAC 173-351). Public Health inspects solid waste handling facilities and has the authority to take corrective action for noncompliance. Under HB 1154, Ecology provides final approval authority to issue or renew landfill permits (active, closed, and inert).

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Figure 2-3. Map of transfer station locations

Processing of Commingled Recyclables

While garbage picked up at the curb goes to the County's solid waste system, the collection companies take the recyclable materials picked up at the curb to their own facilities for processing. The processing of recyclable materials into new commodities begins at a materials recovery facility (MRF). MRFs receive loads from collection trucks, remove contaminants from the loads, sort materials to meet the specifications of the end users or markets, and compact or bale the material for efficient shipping. As the residential collection system has moved to commingled collection, MRFs in the region have upgraded their facilities to improve their ability to remove contaminants and sort materials into marketable commodity grades. Any residuals, or nonrecyclable waste products, from MRFs within King County must be disposed of at a King County solid waste facility, with the exception of residuals arising from source separation occurring at MRFs with the City of Seattle (King County Ordinance 19694).

The processing of recyclables throughout the Pacific Northwest is currently handled through the private sector. Companies that collect recyclables curbside are required by contract or ordinance to deliver them to recycling facilities. Local facilities receive recyclable materials from the region as well as from other areas of the United States. These private-sector facilities have made necessary upgrades over time to expand processing capacity to meet demand. The three largest collection companies in King County—Recology CleanScapes Inc., Republic Services, Inc., and WM, Inc.—each own a MRF located within the county, shown in Figure 2-4, to process most of the recyclable materials they collect. Recology CleanScapes' MRF in south Seattle opened in 2014 and has since added robotic sorting technology to its operations. Republic's 3rd and Lander Recycling Center in south Seattle was substantially redesigned in 2007 to improve its ability to sort commingled materials and, in 2008, was upgraded to expand capacity. WM's Cascade Recycling Center in Woodinville opened in 2002 and was recently upgraded with new technology that is expected to increase overall recycling capacity by 50%. Curbside recyclables collected on Vashon/Maury Island are processed at WM JMK Fibers' Port of Tacoma facility. Table 2-1 shows the address for each facility as well as how many tons were processed in 2025.

Facilities that process mixed recyclables in King County are subject to regulation by Public Health under the Code of the King County Board of Health Title 10.12, which adopts the standards of WAC 173-350.

Table 2-1. Materials recovery facilities locations and tons processed in 2025

Materials Recovery Facility	**Address**	**Tons from King County**	**Total Tons Processed**
Recology Cleanscapes, Inc.	7303 8th Avenue S, Seattle	47,494	58,636
Republic Services 3rd & Lander Recycling Center	2722 3rd Avenue S, Seattle	74,156	179,870
WM Cascade Recycling Center	14020 NE 190th St, Woodinville	63,518	242,053

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Construction and Demolition Recyclables

Generators of construction and demolition materials (C&D) at new construction, remodeling, and building removal jobsites are strongly encouraged to separate out specific recyclable commodities at jobsites and send those materials directly to facilities accepting and recycling single-commodity streams. C&D generators who choose to commingle their C&D materials are required to send their materials for processing at King County-approved private C&D designated processing facilities located in King, Pierce, Snohomish, and Skagit counties shown in Figure 2-4. Any residuals, or nonrecyclable waste products, from C&D materials recovery facilities (MRFs) accepting materials from job sites within the King County service area must be disposed of at a King County approved private landfill, which meets the same federal standards as Cedar Hills and is in compliance with King County Code 10.30.020.

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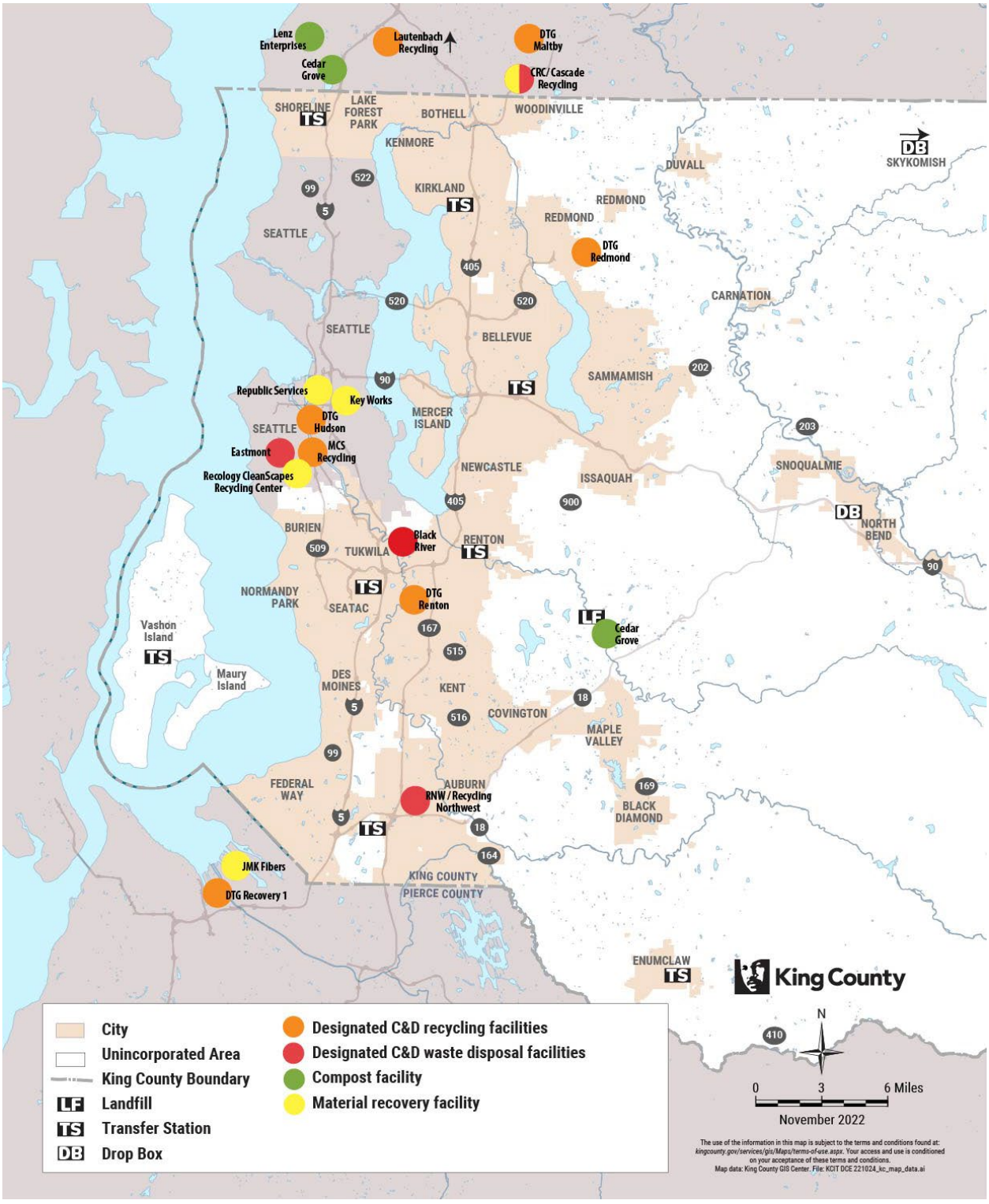
Figure 2-4. Locations of composting, materials recovery, and designated construction and demolition recycling and disposal facilities



Disposal

With the exception of materials generated at jobsites, solid waste generated in King County's service area is disposed of at Cedar Hills—the only active landfill in the county. Nonrecyclable materials generated at jobsites in King County, and processing residuals from C&D MRFs, are required by King County Code 10.30.020 to be disposed of at private landfills that meet the same federal standards as Cedar Hills. Acceptable landfills are reviewed and approved by SWD's Construction and Demolition program staff.

Cedar Hills, located on a 920-acre site in the Maple Valley area, was issued a permit in 1960 and began operations in 1965. Since that time, it has provided safe and efficient disposal of the county's solid waste. In 2024, the landfill received over 839,687 tons of municipal solid waste.

When Cedar Hills was originally permitted, there were few regulations in place to govern the design and operation of landfills. Since then, environmental regulations have become increasingly rigorous, requiring the placement of an impermeable, high-density polyethylene liner and clay barrier at the bottom of the landfill, daily cover (using soil or other approved materials) over the waste, landfill gas and leachate collection systems, and frequent environmental monitoring, among other requirements.

Over time, Cedar Hills has been developed in sequential stages (or refuse areas) in accordance with the most current Site Development Plan. The division has invested considerable effort and resources to upgrade older areas of the landfill while designing and operating new areas to meet or exceed regulatory requirements. Figure 2-5 shows the layout of the landfill, including the boundaries of the closed and active refuse areas, as currently permitted. As shown, Areas 5 and 6 have been re-opened after initial closure in 2007 and are the current active refuse areas until mid-2030. In 2029, fill operations are anticipated to transition to the newest refuse area, Area 9.

The landfill is bordered to the east by a transitional housing developing called Passage Point; more residentially zoned property on the east, north, and west; and by property to the south that is zoned for mining, other resource extraction, and similar uses. State regulation WAC 173-351-140(3)(b) requires a 250-foot buffer between the active area and residentially zoned property, and a 100-foot buffer between the active area and non-residentially zoned property.

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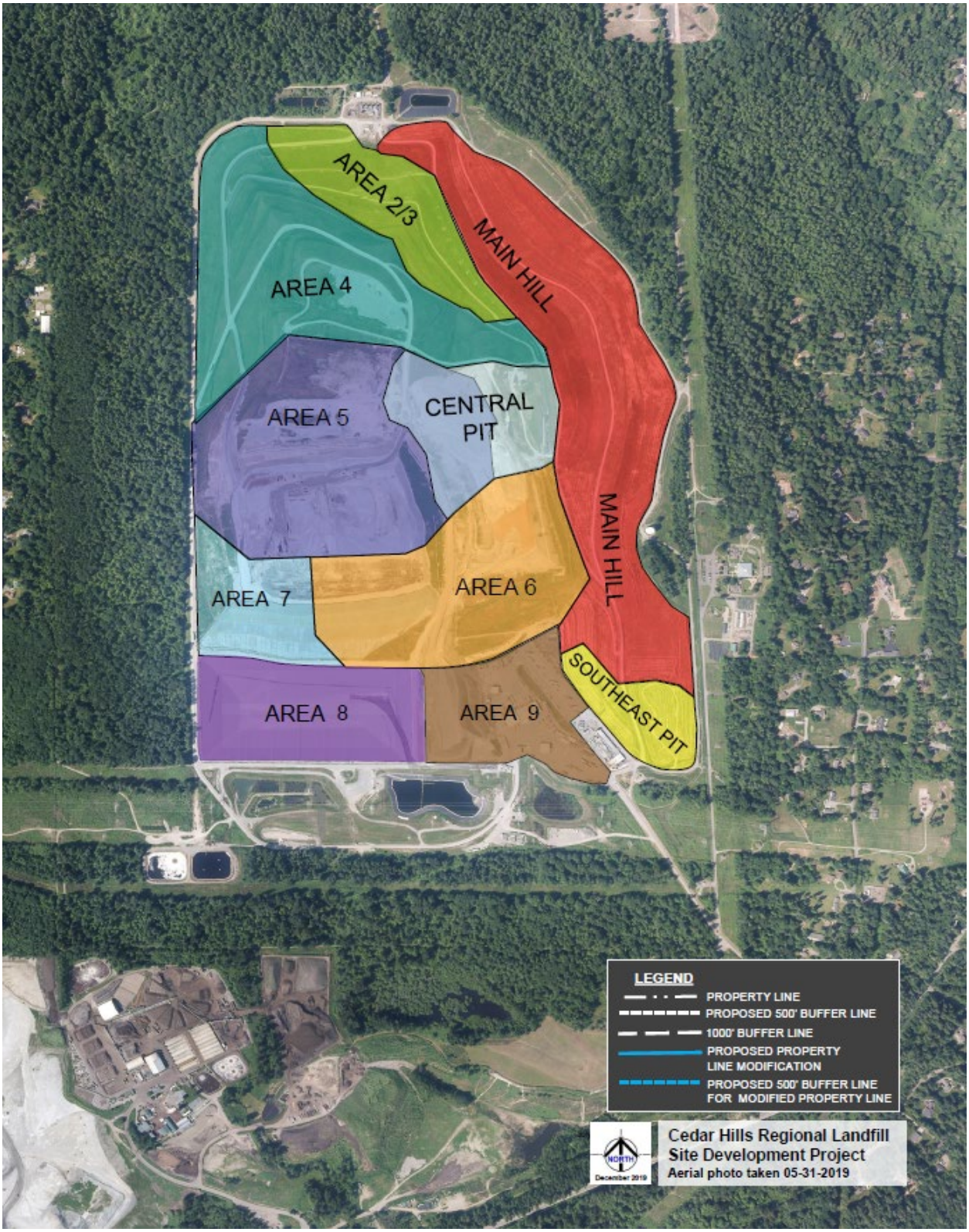
Figure 2-5. Current layout of the Cedar Hills Regional Landfill



However, a special permit approved by the King County Board of Commissioners in 1960 specified that a 1,000-foot buffer be established around the landfill. In the 1960s, landfilling inadvertently extended about 400 feet into a portion of the southeast buffer, but environmental regulations continue to be met in that area and opportunities to restore the buffer are being pursued. Active use of this buffer zone is currently limited to site access and other approved uses not directly related to landfilling operations, such as environmental monitoring and activities at Passage Point.

Stormwater and Landfill Gas Management

The landfill has received national recognition for its operations and environmental control systems, which meet or exceed the highest federal, state, and local standards for protection of public health and the environment. This complex network of environmental controls includes a collection of pipes, culverts, holding ponds, and other equipment to manage water and landfill gas, as described in more detail below.

Water at the landfill is separated into two categories for treatment. These are: 1) clean stormwater, and 2) contaminated stormwater, which includes leachate and other water that has potentially come into contact with garbage. Leachate is produced when water percolates through the garbage; it is collected in pipes within the landfill and diverted to lined on-site ponds. In the ponds, the leachate is aerated as a preliminary treatment before being sent to the King County South Wastewater Treatment Plant in Renton. The bottom liner and clay barrier beneath the landfill prevent leachate from seeping into the soil or groundwater. Stormwater that runs off the surface of active landfill areas is also potentially contaminated. It is collected in lined ponds before moving on to the treatment system. Clean stormwater generated from the permanently closed portions of the landfill and from areas around the division's office spaces is diverted to detention or siltation ponds to control flow and remove sediment and is then discharged to surface water off site.

Landfill gas is generated as buried waste decomposes and typically contains 50–60% methane, with the remainder made up of carbon dioxide and trace amounts of oxygen, nitrogen, and other gases. At Cedar Hills, this gas is collected through a network of perforated pipes installed throughout the waste mass. Centrifugal blowers powered by electric motors create a vacuum that draws the gas into the collection system, where it can be safely managed. A team of skilled Landfill Gas Operators monitors the system every two weeks and routinely makes small adjustments in the field to optimize gas collection across the vast intertwining network and ensure the system performs as efficiently as possible.

Historically, collected gas was directed to high-temperature flares, where it was safely combusted to destroy harmful compounds and reduce emissions. From 2010 to 2023, Cedar Hills partnered with Bio Energy Washington (BEW), which owned and operated a landfill gas-to-energy facility on site. The facility—now owned by SWD and renamed Cedar Hills Renewable Gas to Energy (CHRGE)—processes landfill gas through a series of treatment steps that remove impurities and processes the landfill gas into pipeline-quality renewable natural gas. The resulting clean gas is delivered into the Puget Sound Energy grid system, supplying energy to homes throughout King County. CHRGE also has the ability to use a portion of this renewable gas to power its own operations (Figure 2-6).

The flare system remains available in standby mode and can be activated during maintenance, system outages, or emergency conditions to ensure landfill gas is safely managed at all times. To meet regulatory

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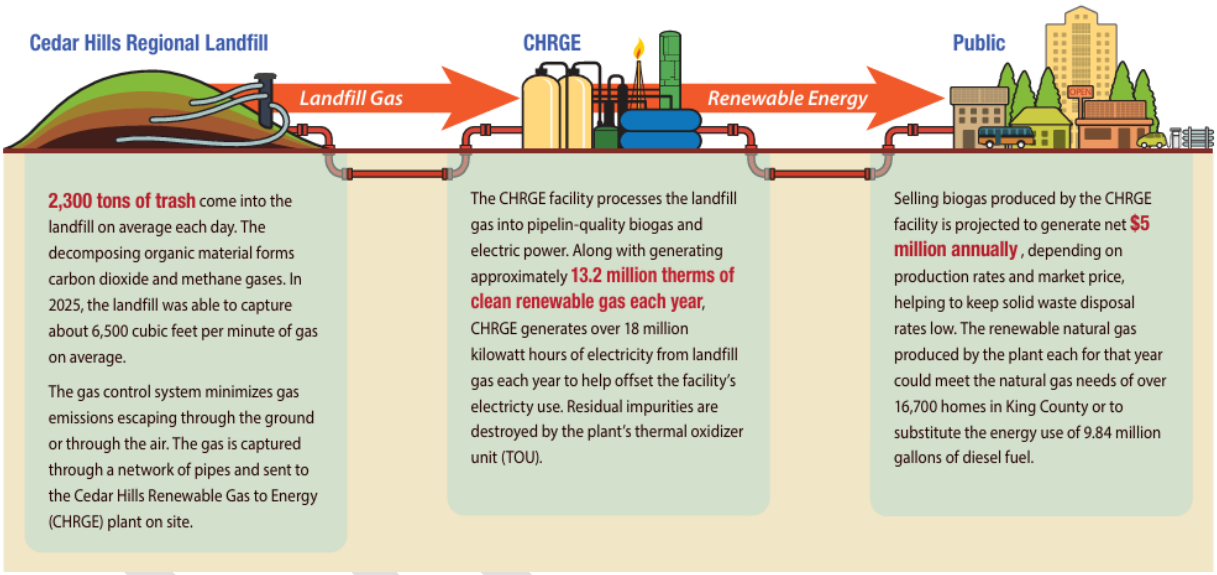
requirements, flare emissions are tested regularly and have consistently demonstrated destruction efficiencies of 98% or greater—meeting or exceeding all applicable federal environmental standards.

All landfill gas monitoring is performed in compliance with state and local solid waste regulations and the site's PSCAA Title V Air Operating Permit. Cedar Hills conducts quarterly monitoring of perimeter gas probes to confirm that methane remains below the regulatory safety threshold of 5% of the Lower Explosive Limit (%LEL). The landfill also performs routine surface emissions monitoring to ensure methane concentrations remain below the PSCAA limit of 500 parts per million (ppm) at the surface of the landfill. These measures confirm that the gas collection and cover systems are working effectively. Any elevated readings are promptly addressed through corrective actions, reported to agencies, and followed by additional monitoring to verify resolution.

Landfill gas operations, monitoring, and reporting at Cedar Hills are regulated under Chapter 173-408 of the Washington Administrative Code (WAC).

Figure 2-6. Landfill gas-to-energy process



Disposal of Special Wastes

Most of the waste delivered to the division's facilities is municipal solid waste (garbage or MSW) from residential and nonresidential sources. It enters through the transfer facilities and requires no review or notification. A portion of the waste stream, however, requires special handling and waste clearance before disposal because of legal, environmental, public health, or operational concerns. In 2024, of the 839,687 tons of solid waste disposed of via the King County solid waste system, 18,277 tons were special waste received under the Division's Waste Clearance Disposal Permits. These special wastes include industrial wastes; documented and compliantly containerized asbestos-containing materials; off-specification, recalled, or expired consumer products; oversized materials; treated biomedical waste; treatment plant grit and vactor wastes (a mixture of liquids and solids that form in stormwater and wastewater systems, sewers, and catch basins); and other miscellaneous materials.

The County's Waste Stream Compliance and Enforcement (WSCE) Unit (formerly Special Waste Unit) provides a free service to customers to evaluate wastes and determine if they can be accepted for disposal and, if so, under what conditions. WSCE staff process and provide around 300 Waste Clearance Disposal Permits for disposal each year. Conditions for disposal could include wetting to control dust, bagging, hauling directly to the Cedar Hills landfill, specific packaging and labeling requirements, separation from other waste in a special waste disposal area, or certification of disposal by authorized landfill staff. Procedures for disposal of special waste are often defined by local, state, or federal regulation.

Working closely with landfill operations staff at Cedar Hills, waste inspectors provide service by appointment to waste clearance customers who must bring certain wastes directly to the landfill for disposal.

[Insert information on special wastes handling once long-term disposal method is recommended.]

Managing Illegal Dumping, Litter, and Junk Vehicles

Managing municipal solid waste that is dumped on open ground is one of the division's responsibilities. Illegal dumping and litter can cause environmental contamination and pose both safety hazards and risks to public health. 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.

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 or accumulated on their personal property, on public property, and on road rights of way.

To facilitate illegal dumping reporting and clean-up response, the division's Report Illegal Dumping in King County system receives complaints online and by phone (206-296-SITE). Complaints are routed to the responsible agency for investigation and clean up. This is a major element in the County's surveillance and control system for illegal dumping. In 2024, King County received and processed 1,001 illegal dumping reports. The division is reviewing this reporting system and may make changes to this service to improve equity and quality of service.

Junk Vehicles

Thousands of junk vehicles and vessels lie rusting and leaking fluids into yards, ravines, parking lots, and open spaces throughout King County, contributing to environmental damage and attracting illegal dumping. Both junk and abandoned vehicles on public property are handled by the local police agency in each city or by the King County Sheriff in unincorporated areas. The Solid Waste Division provides Junk Vehicle Affidavit Service—a free service that allows private property owners without title for these vehicles/vessels to complete the necessary steps to be able to dispose or recycle them. Vehicles must meet the Department of Licensing's criteria for junk and be located on private property to qualify for a

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junk vehicle affidavit issued by division staff. In 2023, the division inspected 760 vehicles and vessels across the county, in city jurisdictions and unincorporated areas, and issued 718 junk vehicle affidavits. Review of the service delivery is in process, which may lead to changes in how or whether the County continues to provide this service to residents in the King County service area.

Regional responsibilities for illegal dumping enforcement, clean up, prevention, and support of junk vehicle recycling and disposal are identified in Table 2-2.

Table 2-2. Illegal dumping clean-up responsibilities

Entity	**Responsibility**
Washington State Department of Ecology	Provides Community Litter Cleanup Program funding for cleanup to local agencies. Sets statewide policy.
Puget Sound Clean Air Agency	Responds to illegal dumping of materials where asbestos is suspected, such as some demolition materials, and addresses illegal dumping where incineration occurs.
Public Health – Seattle & King County	Has county-wide jurisdiction for illegal dumping complaints on private property throughout King County. They do not handle junk vehicles and typically do not perform abatement but work with code enforcement agencies and property owners to ensure proper storage, removal, and disposal.
Hazardous Waste Management Program	Addresses illegal dumping and mishandling of potentially hazardous waste materials.
King County Road Services Division	Responds to complaints and removes illegally dumped materials from public roads and rights of way in unincorporated King County.
King County Department of Local Services	Provides code enforcement. Addresses junk and debris on private property.
King County Solid Waste Division	Responds to complaints about illegal dumping and litter near County solid waste facilities and manages programs for illegal dumping cleanup, the Report Illegal Dumping in King County complaint system, county-wide illegal dumping

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	prevention programs, and Junk Vehicle Affidavit Service.
King County Water and Land Resources Division	Investigates illegal dumping and litter complaints involving surface water.
Cities	Enforce municipal littering and illegal dumping ordinances and provide cleanup of litter and illegally dumped material from city streets and properties.

Disposal Assistance Voucher Program

The division also offers a program called the Disposal Assistance Voucher Program, which enables various environmental site inspectors from the County, cities, and other agencies to request disposal vouchers for residents who are either victims of illegal dumping or on a limited income. By prioritizing assistance over penalties, the program supports the County's Equity and Social Justice principles, helping residents achieve compliance without undue financial hardship. The vouchers subsidize disposal costs to a maximum amount, making it easier for subjects of code enforcement to clean up their properties. As of January 2024, 79 site inspectors from agencies across King County are trained to use the program and have access to it for eligible cases. The division is reviewing this service and may make changes to how this service is delivered.

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 advertising, signage, and other measures.

In 2025, litter crews cleaned up over 140 tons of debris from 222 sites. About 26% of the debris—including items such as tires, appliances, and junk vehicles—was recycled.

Secure Your Load

In accordance with state law since 1994, the division has assessed a fee to the drivers of vehicles with unsecured loads arriving at its staffed transfer facilities and landfill. An unsecured load is one that has not been fastened in or attached to the vehicle with tarps, rope, straps, netting, or chains, so as to prevent any part of the load or the covering from becoming loose, detached, or leaving the vehicle while it is moving.

According to Ecology, road debris causes about 300 accidents every year on Washington State highways, and roughly 40% of litter on highways comes from unsecured loads (Cascadia 2023a).

The requirement to secure loads is in the *, Rules of the Road"* (RCW 46.61.655), which is enforced by the Washington State Patrol. State law (RCW 70.93.097) and King County Code (Title 10.12.040) require the division to charge an unsecured-load fee, which is assessed by scale operators.

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In 2006, the division launched the Secure Your Load outreach program to raise public awareness of the importance of securing loads. The division has worked closely with the King County Sheriff's Office and the Washington State Patrol to enforce the law, and with Ecology and the Maria Federici Foundation to raise public awareness. The fee for an unsecured load arriving at a division facility is $25. Division staff have received training from the Washington State Patrol to help them accurately identify unsecured loads and uniformly assess the fee. The fee for unsecured loads supports safe, clean communities.

Solid Waste System Planning

In addition to regulating solid waste handling and disposal, state law also established a framework for planning, authorizing counties to prepare coordinated Comprehensive Solid Waste Management Plans in cooperation with the cities within their borders. While cities can choose to prepare their own plans, all incorporated cities within King County, except for Seattle and Milton, have chosen to participate in the development of this single, coordinated regional plan for the incorporated and unincorporated areas of King County. Since July 1988, cities have entered into interlocal agreements (ILAs) with the County that establish the Solid Waste Division as the lead planning agency. By the time the first Comp Plan was adopted by the Metropolitan King County Council in 1990, there were 29 incorporated cities participating in this coordinated effort. Since then, eight new cities have incorporated and joined the King County system, for a total of 37 cities.

To make sound planning decisions, it is important to understand how the solid waste system operates today and to identify changes that might affect it in the future. This information is critical to ensuring that plans for facilities, services, and programs meet the needs of the region in the years to come. Because the system is a combination of public and private entities, working with interested parties in the early stages of system planning is essential. In addition to working with local jurisdictions and the private-sector collection companies, the division works closely with its two advisory committees: the Solid Waste Advisory Committee (SWAC) and the Metropolitan Solid Waste Management Advisory Committee (MSWAC). For the preparation of this Comp Plan, the division collaborated with the advisory committees through a process of presentations and discussions.

The next section identifies the participants in the planning process and describes the interested party process that guided the development of this plan. Also included is a brief description of the state, county, and city responsibilities in planning the solid waste system.

A Regional Approach

As partners in a regional system, cities share in the costs and benefits of King County's transfer and disposal system. The regional solid waste system was formally established in King County when the county and cities entered into the original Solid Waste Interlocal Agreement of 1988. In 2013, the County worked with the cities to amend the original ILA. The *Amended and Restated Solid Waste Interlocal Agreement* (Amended and Restated ILA) extends the original ILA by 12.5 years, from June 2028 through December 2040 (the full text of the ILA can be found in Appendix C). The longer term will keep rates lower by allowing for longer-term bonding for capital projects. All 37 cities have signed the Amended and Restated ILA. Cities in the regional system are listed below:

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Algona	Des Moines	Maple Valley	SeaTac
Auburn	Duvall	Medina	Shoreline
Beaux Arts	Enumclaw	Mercer Island	Skykomish
Bellevue	Federal Way	Newcastle	Snoqualmie
Black Diamond	Hunts Point	Normandy Park	Tukwila
Bothell	Issaquah	North Bend	Woodinville
Burien	Kenmore	Pacific	Yarrow Point
Carnation	Kent	Redmond	
Clyde Hill	Kirkland	Renton	
Covington	Lake Forest Park	Sammamish	

The Amended and Restated ILA includes several enhancements to the original ILA, including provisions for insurance and a potential reserve for environmental liabilities. Other changes include:

- Commitment to the continued involvement of the cities advisory group (to be renamed the Metropolitan Solid Waste Advisory Committee or MSWAC)
- An expanded role for cities in system planning, including planning for long-term disposal alternatives and in establishing financial policies
- A dispute resolution process, which includes nonbinding mediation
- Mitigation provisions for host cities and neighboring cities.

Issues specific to individual jurisdictions may require an amendment to the ILA that addresses that particular concern.

Both the original and the new ILA assign responsibility for different aspects of solid waste management to the County and the cities. The County is assigned operating authority for transfer and disposal services, is tasked with providing support and assistance to the cities for the establishment of waste prevention and recycling programs and is the planning authority for solid waste. Each city is designated the authority for collection services within its corporate boundaries and agrees to direct solid waste generated and/or collected within those boundaries to the King County transfer and disposal system.

Cooperation between the County and the 37 cities in a regional system of solid waste management has allowed the division to achieve economies of scale that translate into lower fees for system ratepayers. A significant benefit is the savings realized by being able to extend the life of the in-county landfill for solid waste disposal as a result of improved recycling rates. Economies of scale will continue to be beneficial once the Cedar Hills landfill reaches capacity and closes, and the region transitions to a new method of solid waste disposal (See Chapter 6, *Landfill Management and Solid Waste Disposal*). The benefits also extend to the network of recycling and transfer stations that provide convenient, geographically dispersed transfer points around the county. A regional system can operate with fewer

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transfer facilities than an aggregation of separate, smaller systems. The regional system also allows use of individual stations to be balanced to reduce over- or under-use of any one station.

Regional Authorities and Roles

As defined in RCW 70A.205.015, solid waste handling includes management, storage, collection, transportation, treatment, utilization, processing, and final disposal. Responsibility for solid waste handling in Washington is divided among the state, counties, jurisdictional health departments, and the cities, as delineated in various legislation, regulations, and agreements. Table 2-3 lists the responsibilities for each entity, its role, and the guiding legislation.

As shown in the table, the state establishes authorities, minimum standards, and planning requirements, and delegates responsibility for implementation to the counties and cities.

Table 2-3. Roles in regional planning and administration

Entity	Role	Guiding Legislation, Regulation, or Agreement
Washington State Department of Ecology	Establish solid waste regulations for management, storage, collection, transportation, treatment, utilization, processing, and final disposal.	Revised Code of Washington (RCW) 70A.205
	Delegate authority to the counties to prepare joint comprehensive solid waste management plans with the cities in their boundaries, and review and approve those plans.	RCW 70A.205.040
	Set Minimum Functional Standards for implementing solid waste laws and establishing planning authorities and roles.	Washington Administrative Code (WAC) 173-304, 173-350, and 173-351
		RCW 70A.205.065

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Washington Utilities and Transportation Commission	Review the cost assessment prepared with the Comp Plan.	
	Regulate solid waste collection services and rates in unincorporated areas and in cities that choose not to contract for solid waste collection services.	RCW 81.77
Washington State Department of Agriculture	Review the preliminary draft plan for compliance with RCW 17.24 and the rules adopted under that chapter.	RCW 70A.205.060and RCW 17.24
Public Health - Seattle & King County (as authorized by the King County Board of Health)	Permit solid waste handling facilities, including permit issuance, renewal, and, if necessary, suspension (handling facilities include landfills, transfer stations, and drop boxes). Has countywide jurisdiction for illegal dumping complaints on private property throughout King County and works with code enforcement agencies and property owners to ensure proper storage, removal and disposal.	Code of the King County Board of Health, Title 10
	Make and enforce rules and regulations regarding methods of waste storage, collection, and disposal to implement the state's Minimum Functional Standards.	Code of the King County Board of Health, Title 10
	Perform routine facility inspections.	Code of the King County Board of Health, Title 10
Puget Sound Clean Air Agency	Issues air operating permits and enforces permit compliance.	RCW 70.94, WAC 173-401 and PSCAA Regulation 1, Article 7

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Solid Waste Interlocal Forum (SWIF)	The Regional Policy Committee convenes as the SWIF to advise the King County Council, King County Executive, and other jurisdictions, as appropriate, on all policy aspects of solid waste management and planning, and to review and comment on alternatives and recommendations for the Comp Plan and other planning documents.	King County Code (KCC) 10.24.020C, and Interlocal Agreements
King County Solid Waste Division	Provide transfer and disposal services for unincorporated King County and the 37 cities with Interlocal Agreements. Lead the development of waste prevention and recycling programs.	Interlocal Agreements
	Prepare the Comp Plan and associated cost assessment.	RCW 70A.205.040, KCC Title 10, and Interlocal Agreements
	Establish disposal fees at the landfill, transfer stations, and drop boxes to generate necessary revenue to cover solid waste management costs, including facility operation, capital improvements, waste prevention and recycling	RCW 36.58.040, KCC Title 10, and Interlocal Agreements

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	programs, grants to cities for recycling programs and special collection events, self-haul and rural service, and administration and overhead.	
	Establish level of service and hours of operation for all King County transfer and disposal facilities.	KCC Title 10.10
	Amend hours at transfer facilities, as necessary.	KCC 10.10.020 and 10.10.025
	Designate minimum service levels for recyclables collection in urban and rural areas.	RCW 70A.205.050, KCC Title 10.18
	Ensure that construction and demolition (C&D) waste is managed for the greatest benefit, and least harm, to King County residents.	KCC 10.30 KCC 10.04., KCC 10.24.020, KCC 10.04.020, KCC 4A.670, KCC 4A.200.700, RCW 173.350
	GreenTools program in SWD provides green building technical assistance to county divisions, cities, and the general public within the county.	KCC 18.17
		RCW 70A.205.045

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	Review impacts of the Comp Plan on solid waste and recycling rates.	
Cities	Participate in the planning process and jointly implement the Comp Plan with the County, provide collection services and waste prevention and recycling programs.	RCW 70A.205.040 and Interlocal Agreements
Solid Waste Advisory Committee	Advise the County in the development of solid waste programs and policies, provide feedback on proposed council actions involving solid waste issues, and comment on proposed solid waste management policies, ordinances, and plans prior to adoption.	RCW 70A.205.110 and KCC 10.28
Metropolitan Solid Waste Advisory Committee	Advise the Executive, SWIF, and County Council in all matters related to solid waste management and participate in the development of the solid waste management system and waste management plan.	KCC 10.25.110 and Interlocal Agreements

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Interested Party Involvement in the Planning Process

In the development of the Comprehensive Solid Waste Management Plan, the division sought participation and input from many sources, including the cities, the division's advisory committees, commercial collection companies, Public Health of Seattle & King County, division employees, and the public.

The Metropolitan 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 MSWAC, which consists of elected officials and staff from participating cities.

MSWAC and the long-standing SWAC, mandated by RCW 70A.205.110, have been instrumental in the development of policies, goals, and recommendations presented in this Comp Plan. SWAC has been an advisory group to the division since 1985, with a membership that is geographically balanced and includes King County residents and representatives from public interest groups, labor unions, recycling businesses, the marketing sector, agriculture, manufacturing, the waste management industry, and local elected officials.

Both SWAC and MSMAC have been working with the division to update the recommended actions that form the basis for this Comp Plan. Collaborative efforts that have helped shape the Comp Plan include:

- Developing the goals and actions of Re+, the county's zero waste of resources initiative
- Updating the C&D disposal fee and supporting the development of deconstruction and salvaged lumber reuse efforts
- Closely evaluating the Long-Term Disposal Study to reach an informed decision on the County's next disposal method

For the current planning cycle, the division met with SWAC and MSWAC regularly to discuss their issues and concerns and hear their perspectives on system planning. The contributions of these committees have been instrumental in developing the Comp Plan. The division's SWAC and MSWAC webpage contain background on the committees as well as minutes from their meetings with the division[1].

Employee Safety and Emergency Preparedness

The solid waste system relies on the division's workforce to transfer, process, and dispose of garbage at King County's solid waste facilities. In performing this work, employees are exposed to inherent risks from the widespread use of heavy equipment, the presence of potentially hazardous materials, and the need to manage customers who may engage in unsafe behaviors. It is the division's priority to mitigate these risks and provide a safe workplace for all employees and a safe environment for customers. To this end, the SWD Safety and Emergency Management Unit (SEMU) supports the division in adhering to Washington Administrative Code Title 26 and complying with Washington State Department of Labor & Industries protocols and requirements for a safe workplace through programs, training, and engineering and administrative controls.

Due to the essential nature of the solid waste system, SEMU also supports the division in preparing for, mitigating against, responding to, and recovering from both natural and human-caused emergencies and disasters. That includes being prepared to continue providing these critical services during and after disruptive events. To ensure workplace and personal preparedness, the division informs employees regarding what is expected of them during an incident or emergency, develops contingency plans,

[1] https://kingcounty.gov/en/dept/dnrp/waste-services/garbage-recycling-compost/solid-waste-planning-monitoring/solid-waste-advisory-committees

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provides training, and conducts exercises. The division also uses the mass notification system, KC Inform, to communicate emergency information internally to leadership and employees and externally to interested parties. Should an emergency or disaster occur that impacts the neighbors of any of the division's transfer facilities or the landfill, the division will coordinate with King County Office of Emergency Management to use geospatial mapping services to identify impacted properties and inform them of any damages and/or protective actions.

Trends in Solid Waste Management

Re+: Leading the Way in Waste Prevention, Recycling, and Extended Producer Responsibility

King County continues to demonstrate distinction as a leader in waste prevention and recycling. Together, the division, cities, and community organizations have worked to create the Re+ Program to address climate impacts from solid waste and advance the County's zero waste of resources goal (King County Code 10.14.020). Through the Re+ Program, the County:

- Diverts reusables, recyclables, and other materials of economic value away from disposal at Cedar Hills Regional Landfill and into a more circular economy
- Has identified and targeted paper, plastic, clean lumber, and organic waste—especially food waste—as priority materials
- Gained the cooperation of 26 King County cities to sign on in support of Re+
- Awarded $2 million per biennium in grants to King County organizations focused on waste prevention and prolonging the lifecycle of materials
- Created the Re+ Community Panel, a group of 12 people representing various communities, advising the program in equitable implementation
- Kicked off NextCycle Washington, a statewide platform supporting businesses to further develop their role in the circular economy
- Proposed and supported new legislation to establish more comprehensive policies around Extended Producer Responsibility and organics management
- Created a public-private consortium focused on developing a circular economy for salvaged lumber
- Secured $3.7 million in Climate Pollution Reduction Grant funding to support the local collection, processing, and utilization of salvaged lumber from 2025-2030
- Began salvaged lumber reuse pilot programs at Bow Lake and Shoreline Recycling and Transfer Stations
- Developed and provided deconstruction training to increase capacity in the C&D industry and create a pipeline to green jobs and entrepreneurship advancing the circular economy

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- Established a $400,000-per-biennium grant fund to encourage King County cities to collaboratively tackle waste and recycling issues

The division's focus on sustainable materials management is a way to strengthen the circular economy while reducing the climate effects of materials. This approach emphasizes the importance of looking at the full life cycle of materials: design and manufacture, use, and end-of-life. Circular economy principles are increasingly promoted by both the U.S. Environmental Protection Agency and the Washington State Department of Ecology and are discussed in more depth in Chapter 4, *The Circular Economy.* These strategies build on sustainable materials management by emphasizing the redesign of products, reduction of resource intensity, and recovery of materials to create closed-loop systems.

Since adoption of the 2019 Comp Plan, several bills strengthening the circular economy have been signed into law:

- In 2022-2023, Washington State passed the Organics Management Laws, which require that all residential and nonresidential customers in urban areas that generate more than 0.25 cubic yards per week of organic waste (about 50 gallons) have source-separated organic solid waste collection services by 2030. It also requires businesses to divert organic materials in service areas where commercial organics management facilities are available.
- Washington State also passed a battery extended producer responsibility law (SB 5144) which requires the recycling of all easily removable batteries, including rechargeable batteries, by 2027.
- The LightRecycle WA program was extended with most mercury-containing lights being banned by January 1, 2029, through HB 1185.
- SB 5376 allows the sale of cannabis waste, so it can be repurposed for various materials and products such as animal bedding, packaging or construction materials rather than go to landfill.
- Legislation was also passed that bans certain types of expanded polystyrene packaging and products, as well as banning plastic mini toiletries in hotels.
- In 2025, the Recycling Reform Act, which would increase residential recycling and reuse of packaging, was signed into law. It will create a statewide recycling collection list that would harmonize what is accepted for recycling across the state. It also requires companies to reduce unnecessary packaging and reimburse at least 90% of recycling costs by 2032.
- Washington State also passed two Right to Repair laws in 2025, covering digital electronic products such as computers, tablets, cellphones, and home appliances, and mobility devices such as manual and powered wheelchairs and mobility scooters. The laws would require manufacturers of these products to provide access to parts, tools, and repair information about their products, which could make it much easier for independent repair shops and others to repair items.

Since adoption of the 2019 Comp Plan, there have been a few Washington State Building Code changes adopted which strengthen the circular economy:

- Language was added to both the Residential and Building Codes, allowing the use of "used sawn lumber" without it having to be grade stamped.

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- Language was added to the Residential Code, available for local adoption, that requires residential structures that are 90 years and older to be deconstructed when removed, rather than demolished. This results in significantly more of the structure being able to be reused.
- Language was added to both the Residential and Building Codes, available for local adoption, that requires C&D material management, salvage assessments, and waste diversion reports. The requirement of salvage assessments is key to identifying early the materials in a structure that should be saved for reuse.
- Language was added to the Building Code requiring that space should be designated on the site of new commercial and multifamily buildings for the storage of recyclable materials, compost, and solid waste.

Expanding the Collection of Recyclable and Degradable Materials

King County operates a commingled (or single-stream) collection system for curbside recycling. 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 also more efficient for the companies that provide collection service.

In addition, the division and cities have worked with the contract collection companies to implement curbside collection of food scraps and food-soiled paper in the yard waste (organics) container. About 99% of single-family customers with curbside garbage collection have access to organics (yard waste and food scraps) collection service. Only Vashon Island and the Skykomish and Snoqualmie Pass areas, which house less than 1% of the county's residents, lack this service. Studies show that over 50% of those who set out curbside organics carts recycle some of their food scraps. The combined food scraps and yard waste are taken to processing facilities that turn the materials into nutrient-rich compost used to enrich soils.

Building a New Generation of Transfer Stations

Since approval by the King County Council in 2007 of the *Solid Waste Transfer and Waste Management Plan* (Transfer Plan), the division has been moving forward on the renovation and replacement of its urban transfer stations to update technology, incorporate green building features, increase recycling services, and achieve operational efficiencies. New recycling and transfer stations include areas for the collection of a wide array of recyclables, design features that reduce water and energy use, and solid waste compactors. By compacting garbage prior to transport for disposal, up to 30% fewer truck trips are required to haul the same amount of garbage.

The newest transfer station, the state-of-the art South County Recycling and Transfer Station (SCRTS), opened in 2026 to serve communities in and around Algona, Auburn, Federal Way, and Pacific. It offers expanded services, including recycling for appliances, glass, metals, paper, plastics, wood, and yard waste; hazardous waste disposal for products from homes and qualifying small businesses; and garbage disposal.

SCRTS was designed to meet carbon-neutral performance standards and will be pursuing the Living Building Challenge (LBC) Energy Petal Certification, which is an opportunity for projects to create a positive impact on the human and natural systems that interact with it. Projects that follow the LBC framework create positive environmental, sustainable, and regenerative impacts. Structures that adhere to the LBC design framework focus not only on one area of environmental impact, but on benefitting

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their surroundings through a variety of elements. The SCRTS design focused on the categories of Energy, Place, Equity, and Beauty, and includes the following features that align with the LBC design framework and are environmental and community-enhancing features:

- Solar panels
- Sustainable construction materials
- Natural light
- Native, drought-tolerant plant life
- Tributary realignment and habitat enhancements
- Capture and use of rainwater from the site

Another feature that supports the sustainability certification and the values of SWD is the beauty and representation of art and culture from four regional artists commissioned to develop site-specific pieces for the new facility:

- Artists Tyson Simmons, Keith Stevenson, and Sam Obrovac of the Muckleshoot Indian Tribe's Culture Division created a signature sculpture carved from trees felled on the project site as well as concrete patterning and aluminum medallions for the entry retaining wall. Both artworks reference Muckleshoot stories of air, land, and sea, representing ancestral teachings about the interconnectedness of the world around us.
- Evan Blackwell, visual artist and faculty member at The Evergreen State College, developed a body of work informed by engagement activities and materials sourced during a multi-year residency. Select pieces are installed in the lobby of the administrative building and in the surrounding landscape.

Public involvement was a crucial component of the successful design and construction of the SCRTS facility. Throughout the process, the division worked closely with the City of Algona, neighboring communities, environmental groups, and local businesses and citizens to obtain their input on the project. Some specific examples of suggestions from these groups that were included in the project are green workforce training with DIRT Corps for individuals interested in gaining skills in environment, habitat restoration, and stormwater management; open space preservation and trail signage improvements; and support for urban agriculture and food access.

All new recycling and transfer stations will meet green building, equity, social justice, climate, safety, and environmental standards; accommodate projected growth in the region; incorporate best practices in transfer and transport operations; provide sufficient space for collection and processing of materials of value; and offer a wide variety of recycling opportunities for residential and business customers.

Managing Solid Waste Disposal with an Eye to the Future

Cedar Hills 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 has been

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extending its useful life. This strategy, recommended in the Transfer Plan, was approved by the County Council in 2007. In December 2010, the County Council approved a Project Program Plan enabling the division to move forward with further development of Cedar Hills. As a result of this plan and the adoption of the 2019 Comp Plan, the division is developing Area 9, which will be the final area of the landfill to be used for solid waste disposal. With waste reduction and circular economy actions like Re+, landfill capacity is expected to be extended to 2038. The division will continue these actions as the County moves to the next long-term disposal method.

Financing the Solid Waste System for the Long Term

As the division continues to modernize the transfer system, a fundamental objective is to keep fees as low and stable as possible.

While division revenues rely primarily on per-ton fees for garbage disposal, the current priorities are to increase recycling and prevent waste generation. Reductions in tonnage due to waste prevention and recycling have been gradual, and the system has adjusted accordingly. However, Re+, other waste reduction and diversion efforts, and state legislation will produce further reductions that will continue to affect system revenues. SWD will continue to identify new revenue sources and explore options to reduce costs, including sustainable financing options such as the 2024 rate restructure. The division will also work with its advisory committees and others to develop and/or revise financial policies, and address rate stabilization and cost containment. Policies, actions, and more discussion can be found in Chapter 7, *Solid Waste System Finance*.

Protecting Natural Resources through Environmental Stewardship

Environmental stewardship means managing 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 make this happen.

Waste prevention and recycling are just two ways in which the division and others are working to reduce wastes, conserve resources, and protect the environment.

Other innovations and well-established programs that support environmental stewardship include:

- Collecting and selling landfill gas to be converted to pipeline quality gas
- Providing a system for reporting illegal dump sites across the county and cleanup assistance for illegal dumping
- Providing junk vehicle affidavit service to help residents complete necessary steps to recycle vehicles lacking adequate ownership documents
- Subsidizing some disposal costs for subjects of code enforcement action who are either limited-income residents or victims of illegal dumping on their properties

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Additional Planning Considerations

Climate Change

When planning for future programs, facilities, and operations, the division considers climate impacts in accordance with Washington State's Solid and Hazardous Waste Plan, *Moving Washington Beyond Waste and Toxics*[2], and the County's *Strategic Climate Action Plan*[3] (SCAP). Climate change is manifested in the long-term trends in average weather patterns, including the frequency, duration, and intensity of wind and snowstorms, cold weather and heat waves, and drought and flooding. Climate change is attributed primarily to the emission of greenhouse gases (GHG), including such compounds as carbon dioxide and methane. Planning for climate change means taking into account both how we might reduce our effects on the climate, today and in the future, and how changes in climate might affect our facilities and operations.

King County also recognizes, as outlined in the 2025 SCAP, the asymmetrical experiences that frontline communities face from climate change. Frontline communities are those that will be disproportionately impacted by climate change; these are the populations that face historic and current inequities, often experience the earliest and most acute impacts of climate change, and have limited resources and/or capacity to adapt. This includes Black, Indigenous, and People of Color (BIPOC) communities, immigrants and refugees, people living with low incomes, communities experiencing disproportionate pollution exposure, women, gender non-conforming, and LGTBQIA+ people, people who live and/or work outside, those with existing health issues (like asthma and heart disease), people with limited English skills, those experiencing pregnancy, and other climate-vulnerable groups. The SCAP includes further guidance on supporting frontline communities and building collaborative approaches.

SWD is committed to serving, designing, and executing programming that supports frontline communities in climate resilience. Examples of this include the various low-income discount programs for SWD customers and community education efforts to ensure the County is moving from a linear to a circular and inclusive economy.

The SCAP outlines the division's commitment to reducing direct sources of GHG emissions in its operations. This includes efforts such as transitioning vehicle fleets from fossil fuels to electricity, where technology is available; maximizing the use of renewable energy generated by capturing methane from the Cedar Hills landfill; reducing fugitive methane emissions from Cedar Hills; designing, constructing, and maintaining its facilities to operate at a carbon-neutral performance; and installation of solar panels at transfer stations.

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[2] https://apps.ecology.wa.gov/publications/documents/2104040.pdf

[3] https://cdn.kingcounty.gov/-/media/king-county/depts/dnrp/nature-recreation/environment-ecology-conservation/climate/strategic-climate-action-plan/2025-final-update-2/scap-web-version.pdf?rev=a1459bfade254161bfaa0f28907df40b&hash=CD7B9FF378FFF5A7FB8BF7CFE76AD11F

Against a baseline set in 2007, the King County 2024 Comprehensive Plan[4] targets a 50% reduction in countywide sources of GHG emissions by 2030 and 95% by 2050. King County will be responsible for assessment and reporting.

At a regional level, the division and its planning participants continue to strengthen and broaden waste prevention and recycling programs to continually improve SWD's long-term, positive effects on the environment (discussed in detail in Chapter 4, *The Circular Economy)*. The benefits are tangible in reductions in GHG emissions, resource conservation, and energy savings.

[Callout Box:] King County-Cities Climate Collaboration (K4C)

King County and 24 cities—Bellevue, Burien, Issaquah, Kirkland, Mercer Island, Normandy Park, Redmond, Renton, Sammamish, Seattle, Shoreline, Snoqualmie, and Tukwila—are collaborating through the King County Cities Climate Collaboration (K4C) to coordinate and enhance the effectiveness of local government climate and sustainability action. Through K4C, County and city staff are partnering on outreach to engage decision makers, other cities, and the general public; coordination of consistent standards, benchmarks, and strategies; sharing solutions; funding; and shared resource opportunities.

All King County cities are encouraged to join this effort, which is supporting and enhancing projects and programs in focus areas such as green building, using and producing renewable energy, sustainability outreach and education, and alternative transportation.]

[Callout Box: Regional Code Collaboration

The Regional Code Collaboration (RCC) is a collective of interested jurisdictions from across the Puget Sound region working together to develop building, energy, plumbing, mechanical, fire, and zoning codes supporting the advancement of green building practices. The RCC is staffed and managed by the King County GreenTools Program of SWD and has worked on and established green codes that benefit SWD's line of business. For example, developing proposed Building and Residential Codes associated with deconstruction and salvage that will increase C&D material diversion from landfills. In addition, the RCC works together to adopt local legislation that cities can adopt to help improve the diversion of C&D materials from landfills. In 2024, the City of Kenmore adopted C&D policy that would require homes 70 years and older that are permitted for demolition to be deconstructed in lieu of demolition in order to maximize salvage of valuable building materials that can support a circular economy.

[4] https://cdn.kingcounty.gov/-/media/king-county/depts/local-services/permits/regional-planning/2024-kccp-update/2024-comprehensive-plan-updated-20251202.pdf?rev=85af6c567e5f4073b96874bc799aa003&hash=63CC078FA790FBA1A60D41B54442DC16

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Considerations as to how division activities and operations might affect climate change involve both positive and negative impacts on GHG emissions. If areas where GHG emissions can be expected to occur are identified, strategies to mitigate those emissions can be developed. For example:

- The division turns landfill gas into pipeline-quality natural gas for the energy market.
- The division builds facilities such as the Bow Lake, Factoria, and SCRTS facilities that are more energy efficient to meet Leadership in Energy and Environmental Design (LEED) standards. As previously noted, two of the facilities have earned a LEED Platinum rating. To meet the County's SCAP, new construction capital projects, such as the Northeast Recycling and Transfer Station (NERTS), Cedar Hills Permanent Facility, or other new buildings will achieve carbon-neutral development performance similar to the SCRTS project pursuing Living Building Challenge Energy Petal certification. Existing buildings will pursue improved energy efficiency and, when feasible, install solar panels for renewable energy for a carbon-neutral performance.
- Garbage compactors both for solid waste and recyclables are being installed at all new urban transfer stations, which decreases truck trips by up to 30%, saving fuel and reducing emissions.
- In day-to-day operations, the division looks for ways to reduce resource use and increase the use of environmentally friendly products. Examples of operational practices that reduce GHG emissions include reducing idling time, environmentally preferable purchasing, and exploring the use of electric vehicles, and other low-emitting technologies in trucks and equipment.
- The Food: Too Good to Waste program also helps curb the effects of climate change. Uneaten food accounts for 23% of all methane emissions—a potent climate change contributor. When food is thrown away, all the water and energy used to produce, package, and transport that food is also wasted. The program educates people about how to plan and prepare meals to reduce the amount of wasted food.
- The division and the former Executive Climate Office collaborated on a Geographic and Consumption Based Emissions Inventory[5] for King County, which includes emissions from buildings and new construction. The geographic inventory looks at all GHG emissions released in King County, including electricity produced outside of the County. The consumption-based inventory offers a more complete picture of the county's environmental footprint, taking into account emissions associated with the production and consumption of food, goods, and services, regardless of where they are produced. The report's findings show that efforts, such as reducing food waste or purchasing sustainable and low-impact products, can help to create a broader and deeper impact on global GHG emissions.
- The division has planted deciduous and evergreen trees on the Duvall and Puyallup/Kit Corner closed landfills to create a carbon "sink" by capturing carbon dioxide through the process of photosynthesis.

The division also looks at the potential impacts of climate change on facilities and operations and determines strategies for adapting to them. SWD staff regularly deal with challenges to operations from extreme heat and wildfire smoke. Generally, the most vulnerable systems include water-related systems, such as contaminated stormwater, leachate, industrial wastewater, and stormwater systems that were designed for historic conditions and are sensitive to future changes. Environmental monitoring systems,

[5] https://cdn.kingcounty.gov/-/media/king-county/depts/dnrp/nature-recreation/environment-ecology-conservation/climate/greenhouse-gases/2023-communitywide-geographic-ghg-inventory-report.pdf?rev=1c03491b1e1242aaaad73d5b9b3ba73a&hash=691BA129DC6F00B9CAAA26CC046B4EBC

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landfill gas (LFG) extraction, and landfill cover systems are critical infrastructure and are vulnerable to future changes as well.

Three adaptation strategies were developed to include in the 2025 update of SCAP:

- Develop SWD wildfire management plans
- Add smart controls for leachate and contaminated stormwater monitoring at landfills
- Increase and improve onsite stormwater system capacity at landfills and controls at transfer stations.

These strategies will assist SWD to address climate change impacts in asset management and long-term planning.

[Call-out box: King County – Climate Change]

Proper solid waste management plays a significant role in reducing GHG emissions, a role recognized by both state and local governments in Washington. In 2021, the Washington State Department of Ecology (Ecology) issued its plan, *The State Solid and Hazardous Waste Plan: Moving Washington Beyond Waste and Toxics*, which presents a long-term strategy for systematically eliminating wastes and the use of toxic substances (Cascadia 2021). The *2025 King County Strategic Climate Action Plan* synthesizes and focuses King County's most critical goals, objectives, and strategies to reduce GHG emissions and prepare for the effects of climate change (King County 2025). It provides "one-stop shopping" for County decision-makers, employees, and the general public to learn about the County's most critical climate change actions.

As documented in the 2011 King County Sustainability Report, GHG emissions from County operations—excluding transit—had stabilized and begun to decline at that time. While the SCAP does not provide a breakdown of current GHG sources, it does note that total County operational emissions have decreased from a peak in 2016. Building on these reductions, the County's long-term climate targets remain ambitious yet achievable with continued investment in low-carbon infrastructure, operational efficiency, and cross-sector collaboration.

King County's overarching targets:

- Communitywide: King County shall partner with its residents, businesses, local governments, and other partners to reduce countywide GHG emissions to at least 80% below 2007 levels by 2050.
- County operations: King County shall reduce total GHG emissions from government operations, compared to a 2007 baseline, by at least 80% by 2030 and 95% by 2050.
- SWD decarbonization: The division will accelerate agency projects that reduce direct sources of GHGs, including installing solar panels, using low-carbon construction materials, reducing fossil fuel use in facilities and vehicles, and reducing fugitive methane emissions at landfills. Throughout this plan, ways to reduce impacts on the climate and adapt to changes that do occur are noted.

These actions are grouped in three primary strategies:

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Mitigation—Directly or indirectly reducing emissions. Examples include reducing energy use at division facilities, reducing fuel use, using hybrid vehicles, distributed composting facilities, using alternative fuels, and promoting waste prevention and recycling 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 landfill into pipeline-quality natural gas.

Adaptation—Modifying facilities and operations to address the effects of climate change. Examples include designing facilities for more severe weather systems, such as roofs designed for 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, using biochar (black charcoal resulting from high heat processing of organic material), and using compost to replenish depleted soils and promote plant growth.

Equity and Social Justice

The division adheres to the *King County Equity and Social Justice Strategic Plan 2016-2022,* which emphasizes that King County is committed to ensuring that equity and social justice are considered in the development and implementation of policies, programs, and funding decisions (King County 2016). **Equity** is achieved when all people have an equal opportunity to attain their full potential. Inequity occurs when there are differences in well-being between and within communities that are systematic, patterned, unfair, and can be changed. These differences are not random; they are caused by our past and current decisions, systems of power and privilege, policies, and the implementation of those policies. **Social justice** encompasses all aspects of justice, including legal, political, and economic; it demands fair distribution of public goods, institutional resources, and life opportunities. The Office of Equity, Racial, and Social Justice is in the process of drafting a new Equity and Social Justice Strategic Plan. SWD will continue to center the vision and goals of providing equitable access to services and utilities for all through the policies of the Strategic Plan when the new plan is published.

In solid waste system planning, SWD examines ways that it may affect equity and social justice through its programs and services, and bolsters current projects with outreach and interventions that serve frontline communities, including:

- Fair distribution of transfer facilities, services at the facilities, and division resources—such as the community litter cleanup, school education, and green building programs—helps ensure that everyone has access to services that create safer and healthier communities.
- The division provides technical assistance to ensure that the benefits of green building strategies, such as lower energy costs and improved indoor air quality, are available to residents of affordable housing developments.
- In siting new transfer facilities, the division engages communities to afford equal opportunity for involvement in the siting process. The division uses demographic data to make sure that these essential public facilities are distributed equitably throughout the county and that any negative impacts of the facilities do not unfairly burden any community.

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Green Building and Equity

The goal of the county's Equity and Social Justice Ordinance is for all King County residents to live in communities of opportunity. To reach this goal, all communities must be equipped with the means to provide residents with access to a livable wage, affordable housing, quality education, quality health care, and safe and vibrant neighborhoods. Green building can play an important role in providing safe, healthy, and affordable housing, public infrastructure, and commercial facilities, which have historically not been built to the highest green standards.

There exists a variety of equity and social justice opportunities on any project, including: education, training, apprenticeship, procurement, material selection, contracts, public outreach, public service, community amenities, communication, indoor and outdoor air quality, economic development, job creation, and more.

King County's Sustainable Infrastructure Scorecard, the green building rating system used for County-owned projects not qualified for the LEED certification, contains an Equity and Social Justice (ESJ) category that includes prerequisites and credits specifically applicable to capital projects as an opportunity to address equity and social justice issues. These ESJ credits are now required for all capital projects regardless of what green building rating system is used, as codified by the Green Building Ordinance in the King County Code Title 18.17 and specific Priority Actions in the Strategic Climate Action Plan. The County's Green Building Team is also working on additional guidance for how capital projects can implement the ESJ credits, such as how to utilize an equity impact review tool, which is designed to help project teams to evaluate how people and places are impacted by capital projects, and take into consideration distributional, process, and cross-generational equity.

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Chapter 3 – Forecasting and Data

Ongoing Policies

FD-1	Monitor and report the amount, composition, and source of solid waste entering the transfer and disposal system.
FD-2	Monitor and update the solid waste tonnage forecast to support short- and long-term planning and budgeting for facilities and operations.
FD-3	Monitor and report progress on activities that support a more circular economy, including the amount of materials recycled, programmatic achievements, climate impacts, and the availability of socially and environmentally responsible commodity markets.
FD-4	Continue to monitor new and emerging technologies to identify opportunities for their use in managing solid waste, recyclables, and construction and demolition materials.
FD-5	Perform solid waste, recycling, organics, and construction and demolition characterization studies at regular intervals to support goal development and tracking.

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Summary of Recommended and Ongoing Actions

The following table includes a menu of recommended actions that the King County and the cities should implement. Under the responsibility column, the entity listed first has primary responsibility for the action.

Action Number and Responsibility	Ongoing Action	Detailed Discussion
1-fd County, cities, collection companies	Standardize the sampling methodology and frequency in tonnage reports submitted to the division and the cities by the collection companies to improve data accuracy.	Page #-#
2-fd County, cities, Ecology	Develop voluntary agreements with recycling companies that will improve data reporting and resolve data inconsistencies.	Page #-#

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Forecasting and Data

The monitoring of solid waste disposal, recycling, and waste prevention, and the forecasting of future trends are fundamental to system planning. The division routinely collects data about the amount and composition of waste and recyclable materials in the system, tracks demographic and economic trends that will affect the amount of solid waste generated in the future, and conducts studies to address specific topics, such as markets for recyclable materials, industry trends, and new technologies.

Forecasts are used to estimate the amount of material expected to be disposed of and recycled in the coming years, incorporating expected growth in population and other demographic and economic trends. This information can be used to estimate the necessary capacity of the division's transfer and disposal facilities and associated private-sector recycling facilities and markets.

Existing data and forecasts form the basis for discussions with cities and other interested parties about options for the future, answering questions such as:

- How much waste are system users currently generating and expected to generate in the future?
- How can waste generation be reduced?
- What materials can be separated from the disposal stream and turned into a resource through reuse and recycling?
- Who uses the solid waste facilities and curbside services, how do they choose those services, how often do they use them, and what influences their choices?
- What is the best method to provide these services?
- What changes in markets and technologies need to be incorporated into the division's analysis of options for the future?

Forecasts, planning data, and studies used in the development of this Comp Plan are discussed in the following sections.

Forecasting

The division uses a planning forecast model to predict future waste disposal over a 20-year period. The forecast is used to guide system planning, budgeting, rate setting, and operations. The primary objectives of the model are: 1) to estimate future waste disposal and 2) to provide estimates of the amount of materials expected to be diverted from the landfill through waste prevention and recycling programs, such as Re+. The planning forecast model—a regression model—relies on established statistical relationships between waste generation and various economic and demographic variables that affect it, such as population, employment, consumption (measured as retail sales), and the tipping fees for garbage at division facilities.

The Great Recession that began in 2007 created unpredictability in economic variables used in the division's forecast model to predict the short-term trends in solid waste generation. In response, the division adjusted its approach to forecasting toward a system of ongoing monitoring. This evolving forecast method involves:

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- Regularly checking regional and state-wide economic forecasts from King County's Office of Economic and Financial Analysis (OEFA), Puget Sound Regional Council (PSRC), and Washington State's Office of Financial Management (OFM)
- Monitoring statewide tax revenue streams
- Communicating regularly with other jurisdictions about the trends in their service areas

The outbreak of the COVID-19 pandemic in early 2020 and the associated shutdown ushered in widespread work-from-home policies in the region that further disrupted established relationships between the amount of garbage generated and the economic variables in the division's model. Non-residential municipal solid waste (MSW) tonnage dropped by more than 19% between the first and second quarters of 2020.[6] During the same time period, residential tonnage increased by 9%. Other external factors that have influenced solid waste tonnage in recent years include specific policies related to self-haul transactions. For example, the ban of C&D waste, and the customer verification policy to ensure that only county residents and businesses dispose of garbage at County facilities, resulted in reduced tonnage brought to Cedar Hills. In addition, a new agreement with the City of Seattle on the disposal of residuals from materials recovery facilities (MRFs) resulted in a substantial drop of Regional Direct tons sent to Cedar Hills Regional Landfill.[7]

The current model for tons disposed relies on historical tonnage as well as forecasts of economic and demographic data for the service area. With the existing economic and demographic forecasts from the OEFA, PSRC, and OFM, the division can make a prediction for disposal over the next 10 years. After that point, the disposal tonnage forecast uses a long-term growth rate based on historical tonnage.

The main features of the baseline forecasting model are:

- Tonnage disposed from 2007 to present
- Historical employment per capita and employment per capita projections using OEFA and PSRC data
- Historical taxable retail sales per employee in the service area and taxable retail sales per employee in the service area projections using OEFA, OFM, and PSRC data
- Estimated tonnage disposed using an annual growth rate of 1.76% beyond the years of the OEFA, OFM, and PSRC data forecasts

Increases in population, employment, and consumption lead to more waste being generated. Studies indicate that, for the long-term planning forecast through 2050, the following trends are expected:

- Population is expected to increase by an annual rate of 1% between 2025 and 2050.[8] Population growth is directly correlated with the amount of waste generated, i.e., more

[6] Hauler database, 2020.

[7] Regional direct tonnage decreased by more than half (58%) after the City of Seattle signed the new ordinance on May 30, 2024.

[8] Projections for population and employment are based on 2023 data from the Land Use Vision 2 model developed by the Puget Sound Regional Council (PSRC). Data provided by PSRC are based on U.S. Census and other data sources and developed in close cooperation with the county and the cities.

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people equals more waste generated. See Figure 3-1 for estimates for population growth in each transfer station service area and Figure 3-2 for the projected share of population growth in each service area.

- Employment is expected to increase at an annual rate of 1.2 percent between 2020 and 2050, which is expected to lead to an increase in consumption and waste generation.

Figure 3-1. Projected Transfer Station Service Area Populations 2025-2050

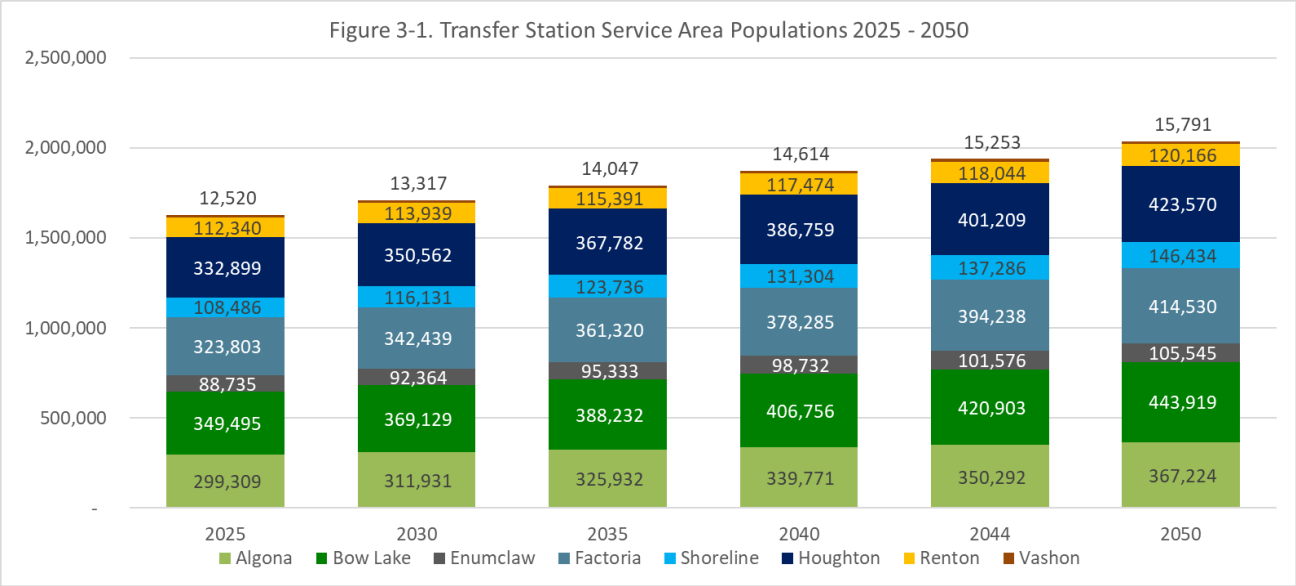
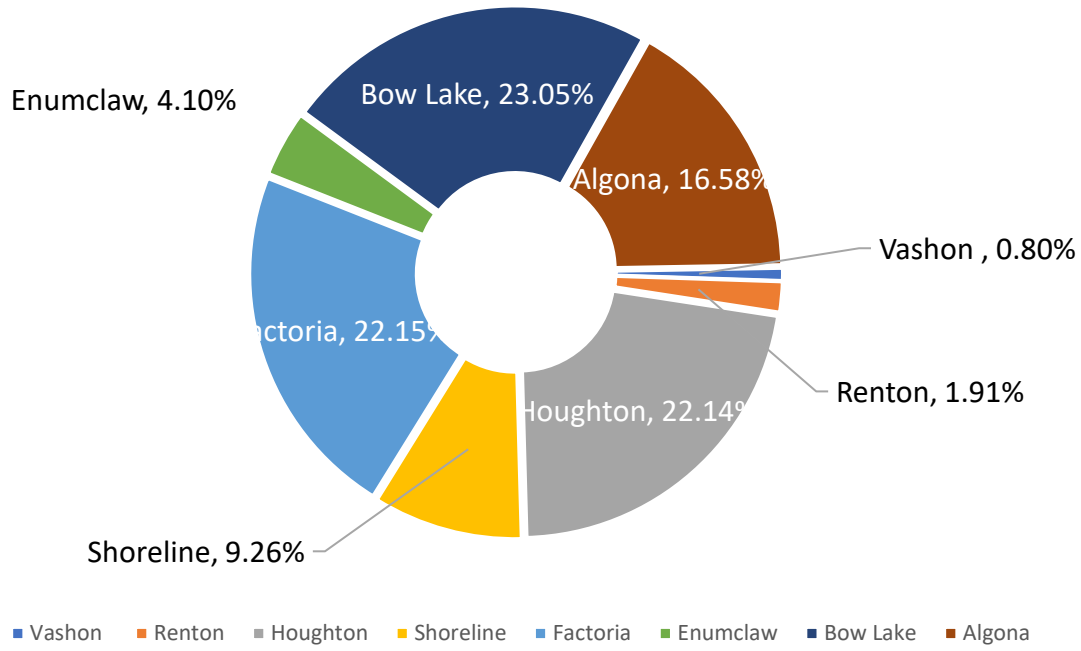


Figure 3-2. Estimated share of population increase for transfer station service areas 2025-2040

Figure 3-2. Estimated Share of Population Increase 2025-2050
(for transfer station service areas)



The baseline tonnage forecast is adjusted to estimate the decrease in disposed tonnage as a result of Re+ actions. In this Re+ adjusted forecast, tonnage impacts are estimated as percent reduction per year, stream type (single family, multifamily, or nonresidential), and material, according to waste characterization studies. This final "Re+ forecast"—the baseline economic forecast less the reductions to account for the impact of Re+—is used in budget and rate setting work and for other planning purposes. (For more information on Re+, please see Chapter 4, *The Circular Economy*.)

In 2024, forecast adjustments were made for various Re+ actions, including, but not limited to, organics policy actions, extended producer responsibility legislation, and transfer station recycling recovery initiatives, such as Sort It Out+. Impact adjustment percentages are set based on input from subject matter experts and data from pilot studies and comparable regions. Reductions are capped according to physical limitations, such as the size and tonnage capacity of a mixed-waste processing facility, and maximum recoverability. In general, we assume that no more than 80 percent of any one material is recoverable from the waste stream. This 80 percent recoverability limit also prevents double-counting of impacts across overlapping Re+ efforts.

The main characteristics of the Re+ forecasting model are:

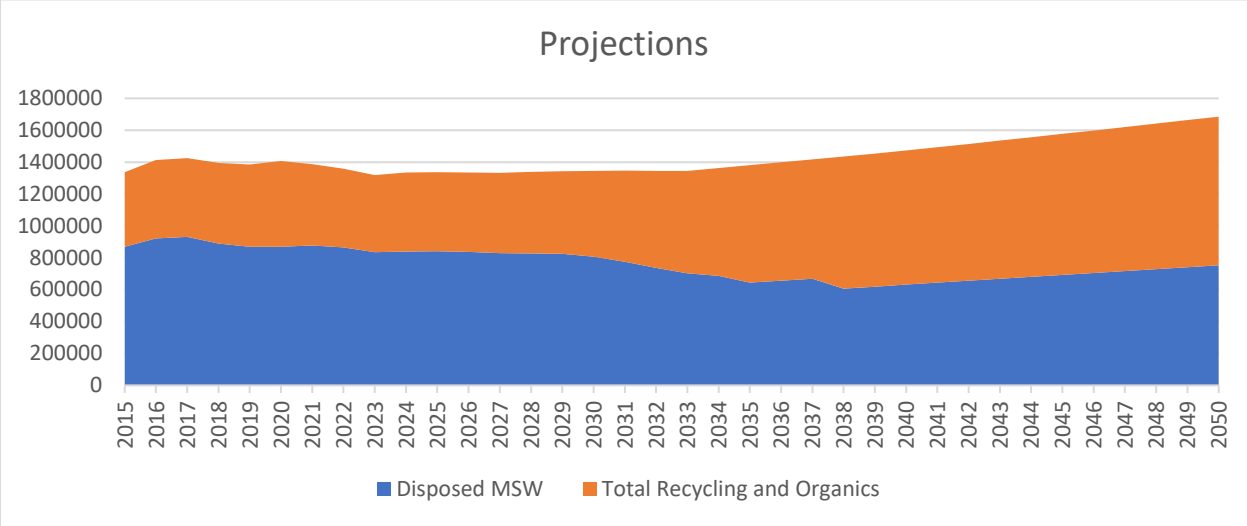
- Baseline forecast between 2025 and 2040

- Lower diversion forecast: "Low impact" adjustment scenario that assumes lower percent reductions potentially impacting fewer producer streams
- Higher diversion forecast: "High impact" adjustment scenario that assumes actions have greater impact and/or are more efficient at removing recoverable materials from the garbage
- Estimated tonnage disposed between 2041 and 2050 using a three-year moving average

The forecast for recycling and organics tonnage relies on commercial hauler data as well as tonnage estimates for material-specific recycling initiatives, such as E-Cycle, paint stewardship, health and hazardous waste, and yard waste collected at Cedar Grove. Recycling and organics projections between 2025 and 2050 also capture tonnage diverted from Re+ actions.

The projections shown in Figure 3-3 are based on the 2024 Re+ Forecast. The tonnage forecast will be routinely adjusted to reflect factors that affect waste generation, such as the success of waste prevention and recycling programs and future events that affect economic development.

Figure 3-3. Tonnage Projections of Waste, Recycling, and Composting to 2050



Current Demographic Data

As of 2026, King County is the 13th most populous county in the United States. King County has a total land area of 2,115 square miles (1,363,200 acres). About 90 percent of King County's population lives in cities, while about 249,600 residents live in unincorporated areas. By race, the population breaks down as:

- Non-Hispanic White: 51 percent
- Black and African American: 6 percent
- Asian: 22 percent
- Native Hawaiian and Pacific Islander: 1 percent

- Native American and races not listed: 1 percent
- Hispanic and Latinx: 11 percent
- Multiracial: 8 percent

The top 10 languages spoken in King County besides English are:

1. Spanish
2. Chinese
3. Vietnamese
4. Korean
5. Russian
6. Tagalog
7. Japanese
8. Amharic
9. Somali
10. Ukrainian

Top languages may vary depending on location within the King County service area. SWD uses demographic and language data to develop mailers, signage, and meeting materials to help communicate important information, including, but not limited to:

- Keeping people informed and gaining feedback on capital projects
- Conducting outreach about SWD services
- Ensuring safety and ease-of-use for customers at our sites
- Informing vulnerable communities of discount disposal offerings
- Engaging with community panels in-language
- Educating and promoting recycling and circular economy work

Current Data on Regional Waste Generation, Recycling

The transition to a circular economy involves many actions at multiple levels, which makes measuring the results of waste prevention, recycling, and other circular economy efforts a complex process. Discussions and data often focus on recycling and recycling rates, when, in fact, waste prevention is the number one priority. While programmatic successes for waste prevention can be assessed qualitatively, it is difficult to measure directly how much waste is "not created" in terms of tons or percentages. What can be measured more accurately is recycling and disposal activities. Data for these activities are available through division tonnage and transaction records, reports from the curbside collection companies, the Washington State Department of Ecology (Ecology), and the division's waste characterization studies. Using data on the types and amounts of materials recycled, combined with measures of waste disposed, the division can evaluate its success in reaching the goals established with each successive comprehensive solid waste management plan.

Figure 3-4 shows the tons of materials recycled and disposed in 2024 by category of waste generator—single-family residents; multifamily residents; nonresidential customers such as businesses, institutions,

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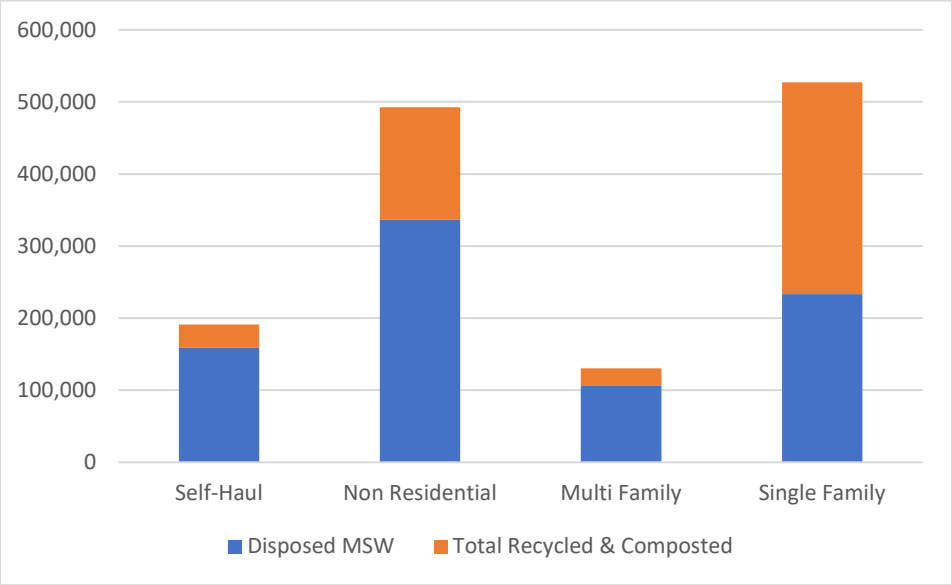
and government entities; and self-haulers who bring materials directly to the division's transfer stations.[9] More specific information on each generator type follows, including generators of C&D debris for recycling and disposal. Note that the scale on each figure varies.

Figure 3-4. Tons Recycled and Disposed by Generator Type in 2024



While there has been considerable progress in waste prevention and recycling over the years, there is still room for improvement. As Figure 3-4 illustrates, the nonresidential sector provides the greatest opportunity to divert materials from disposal, with almost 340,000 tons of materials disposed of in 2024. Single-family residents are recycling more than 56 percent of their waste, but division studies indicate that, as discussed in the next section, a large portion of the disposed materials could be recycled or reused. The multifamily sector generates the least amount of garbage and recycling of all sectors, but shows a need for improvement in recycling.

The data shows that self-haulers, as a group, are recycling the smallest fraction of their waste. That may be because: 1) self-haul customers are using curbside recycling services at home before using the transfer stations, and 2) at the older transfer stations, there is limited or no opportunity to recycle. However, subsequent to completion of the 2019 Comp Plan, two of the division's urban stations are being replaced by newer facilities with more capacity for recycling collection—these are the South County and Northeast recycling and transfer stations. A major goal of the renovation plan is to add space for collection of more recyclables and to build flexibility into the design to allow for collection of additional materials as markets develop. Adding space for collection of greater amounts and a wider array of materials is expected to result in higher recycling rates at the transfer stations.

With studies indicating that up to 70 percent of the waste that reaches the landfill could have been recycled or reused, and specific data on what those materials are, the division can focus on areas that

[9] Source: Commercial hauler data and SWD database

will have substantial influence on the region's per-capita disposal rate. The following sections address each category of generator and identify some of the more significant areas for improvement.

Single-Family Residents

Single-family homes, including mobile homes, comprise 59% of the households in the division's service area.[10] In 2024, these single-family households recycled on average about 56% of their waste. That same year, 94% of the yard waste and 59% of the paper generated were recycled by this sector (Figure 3-5). While food scraps and food-soiled paper made up over 27% of the waste disposed by single-family residents in 2024, recycling of these materials has increased as participation in the curbside collection program for them continues to grow. Despite being easily recyclable, significant amounts of the standard curbside recyclables are still present in the waste disposal stream. This includes containers made from glass, plastic, tin, and aluminum, as well as paper, including mixed wastepaper, newspaper, and cardboard.

Figure 3-5. Tons of Materials Recycled and Disposed in 2024 by Single-Family Residents[11]

Category	Tons Recycled	Proportion of Recycled Materials
Mixed Containers	25,679	9%
Food	19,755	7%
Metal	1,143	0%
Other Materials	7,124	2%
Paper	66,494	23%
Plastic Bags and Packaging	3,216	1%
Yard Waste/Organics	170,392	58%
Total:	293,802	

Category	Tons Disposed	Proportion of Disposed Materials
Mixed Containers	9,387	4%
Food	62,065	27%
Metal	8,105	3%
Other Materials	76,955	33%
Paper	43,061	18%
Plastic Bags and Packaging	22,828	10%
Yard Waste/Organics	11,087	5%
Total:	233,488	

[10] 2024 – Postcensal Estimate of Housing Units Office of Financial Management, Forecasting and Research, WA State

[11] Data are generated using the material splits from the 2022 Waste Characterization study applied to the disposal tonnage from 2024,the 2022 Material Recovery Facility assessment material splits applied to the 2024 recycling tonnage, and the 2022 Organics Characterization Report splits applied to the 2024 curbside organics tonnage.

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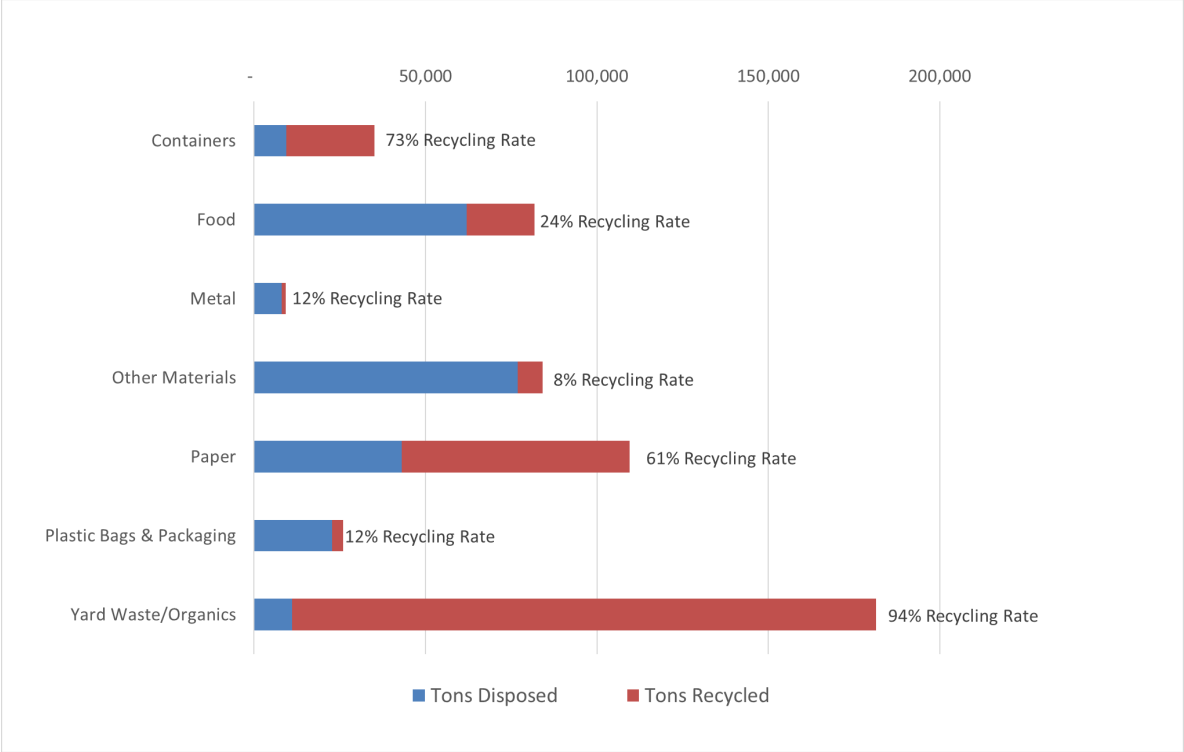
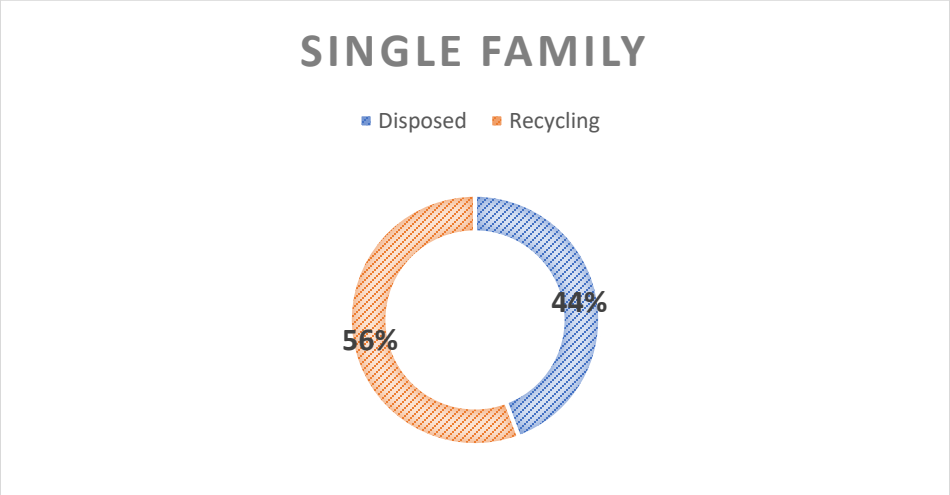
Figure 3-6. Proportion of Tons Disposed vs. Tons Recycled from Single-Family Households





Recommendations for improving and standardizing curbside collection for single-family residents are discussed in Chapter 4, *The Circular Economy.* Other recyclables found in the single-family waste stream

in smaller amounts include metal, plastic bags and packaging, and some yard waste and organic materials, such as clean wood.[12]

If all recyclable materials were removed from the single-family waste stream, nearly one-third of the remaining, nonrecyclable materials would be disposable diapers and pet wastes.

Multifamily Residents

Multifamily complexes make up 35% of the households in the service area . In 2024, the average multifamily recycling rate in the County's service area was 18%. While this rate is considerably lower than the single-family rate, overall generation and disposal from multifamily residences is lower. As with single-family residents, the primary areas of opportunity are in recycling food scraps and paper (Figure 3-7). With the passage of the Recycling Reform Act in 2025, multifamily recycling will be studied in 2026 and 2027 to identify gaps or challenges through needs assessments. The new law also mandates that the state building code require space at multifamily properties for source-separated waste, such as recycling and organics.

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[12] Plastic bags and film were banned from curbside recycling within King County in January 2020. Otherwise, King County has no restrictions on the acceptance of recyclable plastics, although plastics #1, #2, and #5 have the highest recycling rates in Washington State, according to the Plastic Packaging in Washington Assessing Use, Disposal, and Management report. Acceptance of plastic items varies by hauler and city.

Figure 3-7 Tons of Materials Recycled and Disposed in 2024 by Multi-Family Residents[13]

Category	Tons Recycled	Proportion of Recycled Materials
Mixed Containers	2,012	9%
Food	1,370	6%
Metal	452	2%
Other Materials	1,363	6%
Paper	17,063	72%
Plastic Bags & Packaging	593	3%
Yard Waste/Organics	701	3%
Total:	23,554	

Category	Tons Disposed	Proportion of Disposed Materials
Mixed Containers	6,740	6%
Food	25,053	23%
Metal	4,095	4%
Other Materials	34,679	33%
Paper	20,531	19%
Plastic Bags & Packaging	10,335	10%
Yard Waste/Organics	5,177	5%
Total:	106,609	

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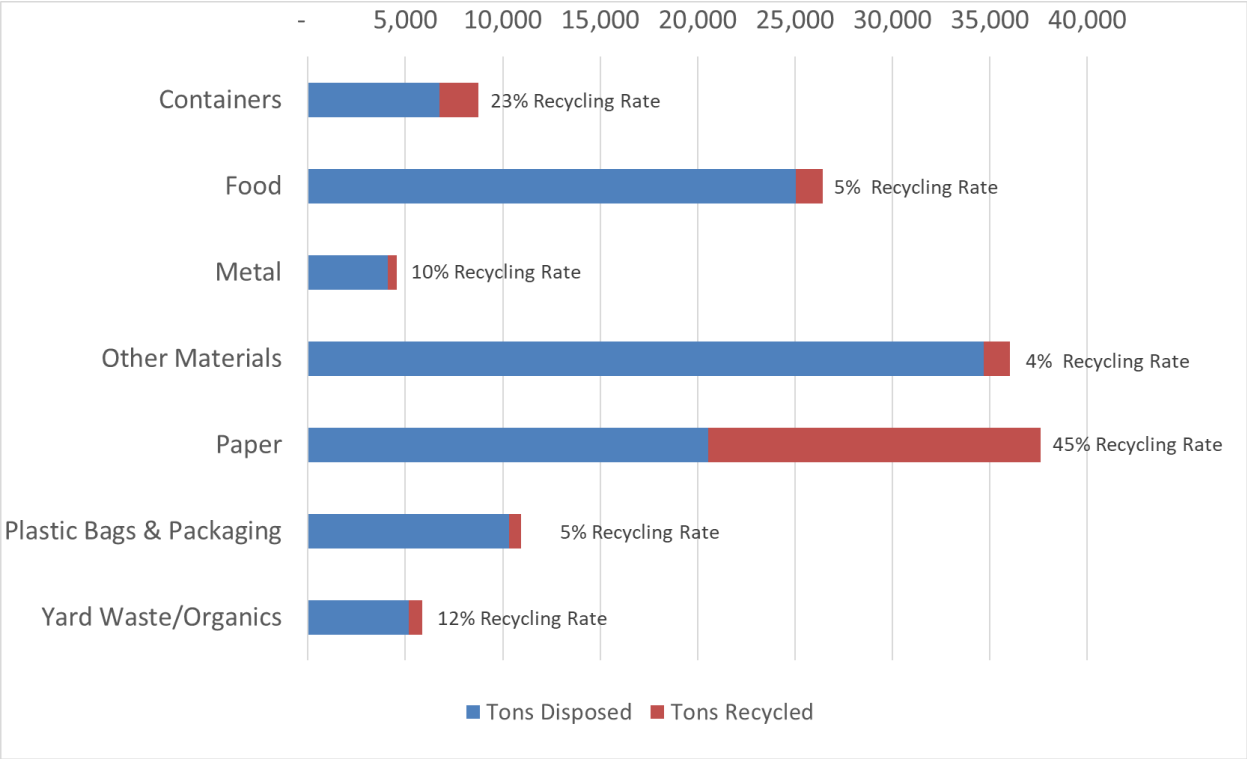
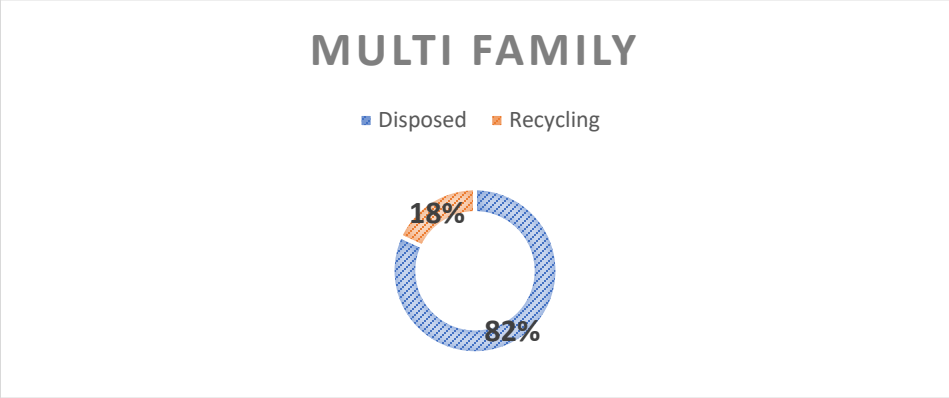
[13] Data are generated using the material splits from the 2022 Waste Characterization study applied to the disposal tonnage from 2024, the 2022 Material Recovery Facility assessment material splits applied to the 2024 recycling tonnage, and the 2022 Organics Characterization Report splits applied to the 2024 curbside organics tonnage. The division used the non-residential organics split between food and yard waste/other organics for multi-family generators.

Figure 3-8. Disposal vs. Recycling Rate by Material for Multifamily Residents





Other materials present in the multifamily waste stream, both recyclable and nonrecyclable, are similar to those found in the single-family waste stream.

It is difficult to track multifamily recycling rates because of: 1) the varied nature of multifamily complexes, including the variable number of residents per unit, 2) the growth in construction of mixed-use buildings that contain both residential and nonresidential units, and 3) the varied levels of recycling services provided among different jurisdictions. With changes to state policy on space requirements occurring over the life of this Comp Plan, it is clear there will be increasing use of recycling and composting services by 2035. There is opportunity for jurisdictional coordination to ensure adequate

space for garbage and recyclables collection at these complexes and to standardize collection across the county.

A detailed discussion of ways to improve recycling at multifamily and mixed-use complexes is provided in Chapter 4, *The Circular Economy*.

Nonresidential Generators

Nonresidential generators—businesses, institutions, and government entities—recycled an estimated 32% of their waste in 2024 (Figure 3-9). Nonresidential generators present an opportunity for increasing King County's overall recycling rate. There are an estimated 878,000 employees in the service area working across a broad range of sectors and industries, from manufacturing to technology and retail to food services (King County, October 2025). Opportunities for taking action to create more circularity for any particular business or industry—for example, on recycling potential—vary depending on the nature of the business. For example, restaurants and grocers are the largest contributors of edible food and food waste, while warehouses may generate large quantities of cardboard and other packaging materials. Because of the diversity of business and industry in the region, a more sector-specific approach is needed to keep materials in use longer for these generators. Much of the region's focus on material management has been focused on curbside residential customers, with more coordinated interjurisdictional work needed by 2035.

There are significant opportunities in the nonresidential sector to increase the diversion of food scraps and food-soiled paper and recovery of edible food. The largest increase will be realized as more restaurants and grocers contract with private-sector companies to collect their food scraps for composting in order to comply with Organics Management Law requirements and more cities begin to offer commercial organics collection. Through the Re+ initiative, there will be focused technical support for commercial generators of food waste along with an increased focused on compliance and enforcement due to changing state requirements for these generators. Though there are no state requirements around edible food donation at this time, promoting food rescue for human consumption remains a priority as it is the most socially and environmentally preferable outcome.

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Figure 3-9. Tons of Materials Recycled and Disposed in 2024 by Non-Residential Generators[14]

Category	Tons Recycled	Proportion of Recycled Materials
Mixed Containers	13,424	9%
Food	8,431	5%
Metal	3,017	2%
Other Materials	9,092	6%
Paper	113,862	73%
Plastic Bags & Packaging	3,955	3%
Yard Waste/Organics	4,247	3%
Total:	156,029	

Category	Tons Disposed	Proportion of Disposed Materials
Mixed Containers	12,625	4%
Food	63,271	19%
Metal	16,525	5%
Other Materials	90,739	27%
Paper	67,742	20%
Plastic Bags & Packaging	42,835	13%
Yard Waste/Organics	42,826	13%
Total:	336,564	

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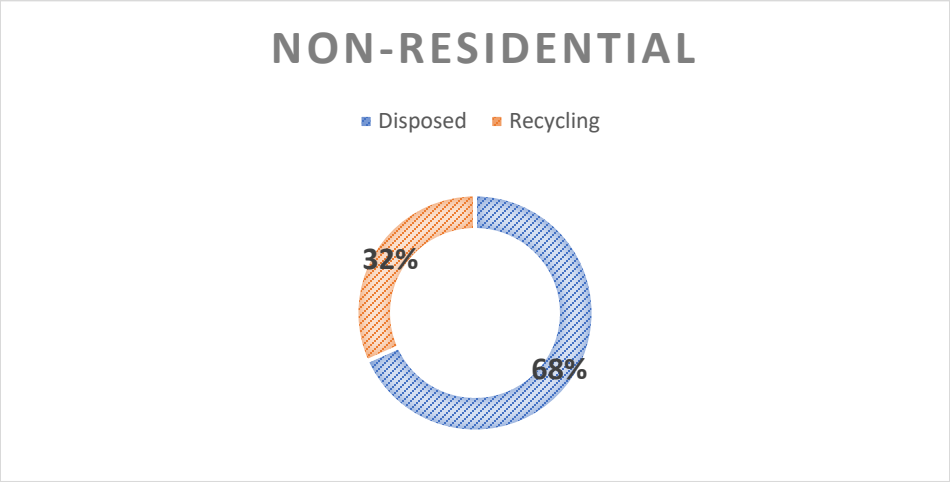
[14] Data are generated using the material splits from the 2022 Waste Characterization study applied to the disposal tonnage from 2024,the 2022 Material Recovery Facility assessment material splits applied to the 2024 recycling tonnage, and the 2022 Organics Characterization Report splits applied to the 2024 curbside organics tonnage.

Figure 3-10. Proportion of Materials Disposed and Recycled from Nonresidential Generators



Another opportunity for reducing overall disposal is with commercially generated paper. While large amounts of paper are being recycled, almost 70,000 tons of recyclable paper were disposed by businesses in 2024. Paper may also provide an opportunity for waste prevention—not just moving from disposal to recycling but aiming to reduce the generation of wastepaper in the first place.

Self-haulers

Self-haulers are residential and nonresidential customers who choose to bring garbage and recyclables to the transfer facilities themselves. According to on-site surveys conducted as part of the division's waste characterization studies, the two most common reasons given for residential self-hauling are: 1) having a large quantity of waste or large or bulky items to dispose, and 2) cleaning out or moving. Among commercial self-haulers, the two most common reasons are: 1) work purposes, and 2) not having traditional waste collection services available. About 37% of the materials disposed of by self-haulers have the potential for recycling, most significantly clean wood, curbside recyclables, metal, and yard waste (Figure 3-11). Since 2015, self-haul recycled tonnage has increased from 21,000 tons to more than 50,000 tons.

Figure 3-11. Tons of Materials Recycled and Disposed in 2024 by Self-Haul Customers[15]

Category	Tons Recycled	Proportion of Recycled Materials
Appliances	828	2%

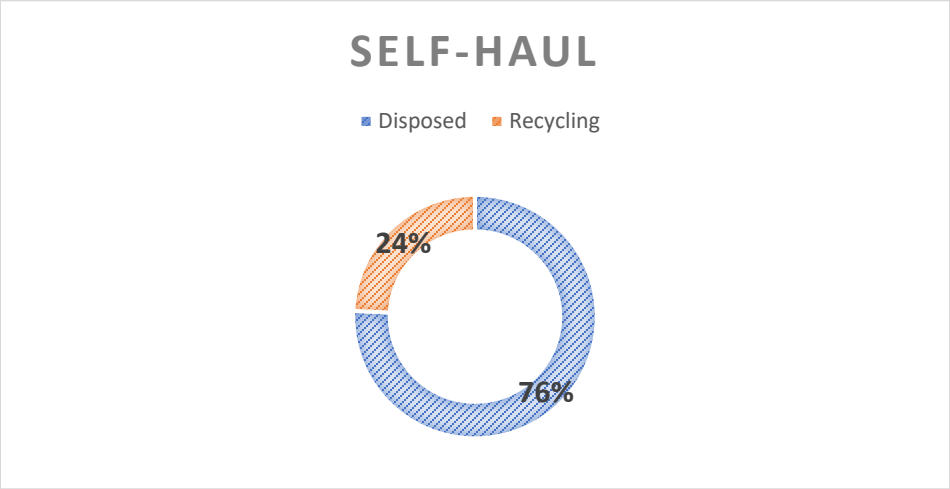
Category	Tons Disposed	Proportion of Disposed Materials
Appliances	2,318	1%

[15] Data are generated using the material splits from the 2022 Waste Characterization study applied to the disposal tonnage from 2024 and the 2022 Material Recovery Facility assessment material splits applied to the recycling tonnage.

Clean Wood	3,255	6%
Curbside Recyclables	4,549	9%
Food		
Mattresses & Textiles	1,084	2%
Metal	6,194	12%
Other Materials	130	0%
Yard Waste/Organics	34,901	69%
Total:	50,942	

Clean Wood	22,125	14%
Curbside Recyclables	15,444	10%
Food	315	0%
Mattresses & Textiles	18,513	12%
Metal	25,964	16%
Other Materials	65,013	41%
Yard Waste/Organics	9,476	6%
Total:	159,169	

Figure 3-12. Proportion of Materials Disposed vs Recycled from Self-Haul Customers



At the older stations and drop boxes where space is limited, the division provides collection containers for the standard curbside recyclables, which include glass and plastic containers, tin and aluminum cans, mixed wastepaper, newspaper, and cardboard. No recyclables are collected at the Algona Transfer Station due to severe space limitations. At the stations that have been renovated and have more space, additional materials, such as textiles, scrap metal, used bikes, and appliances, are also collected. Other materials will be collected as markets develop. There are a number of materials still prevalent in the self-

haul waste stream for which there are currently insufficient or no recycling markets, such as treated and painted wood.

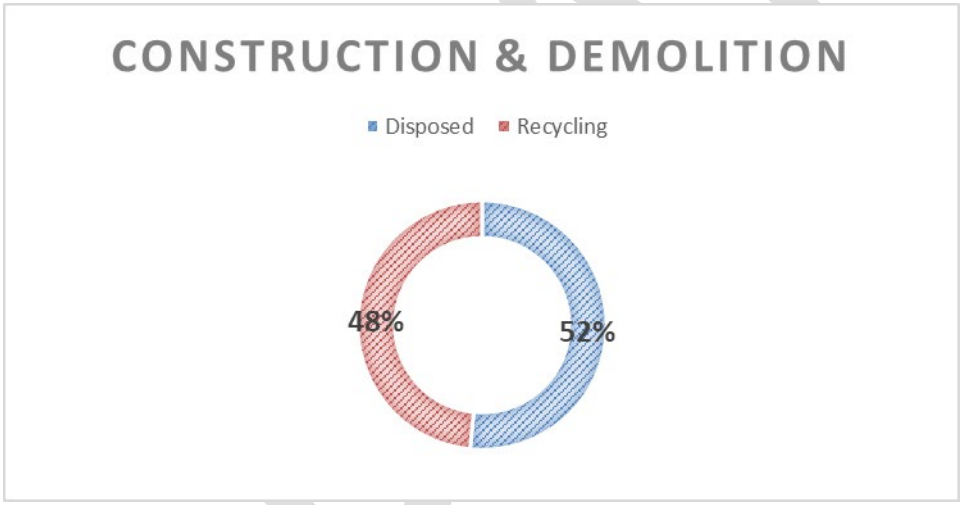
Generators of Construction and Demolition Debris

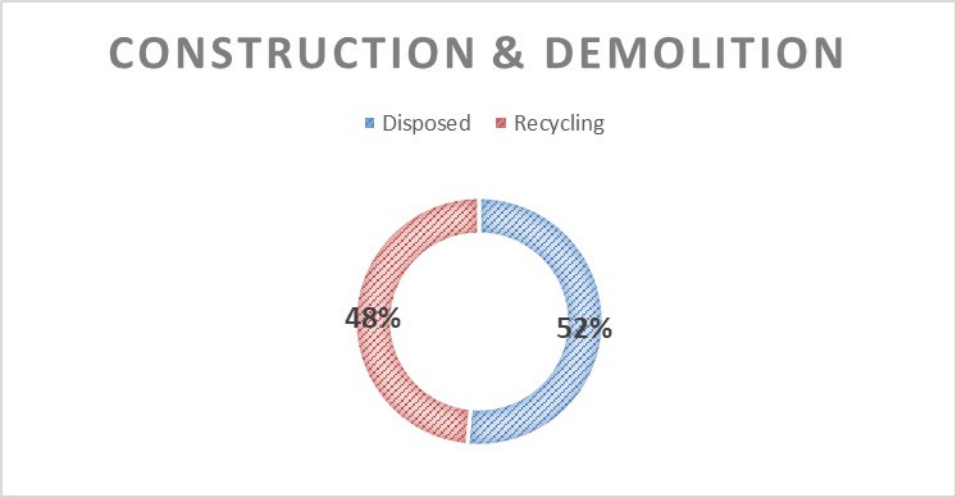
In 2023, over 1.5 million tons of construction and demolition (C&D) debris were generated in King County including Seattle. Debris from the construction, remodeling, repair, or demolition of buildings, other structures, and roads includes clean wood, painted and treated wood, dimensional lumber, gypsum wallboard, roofing, siding, structural metal, wire, insulation, packaging materials, concrete, asphalt, and other aggregates.

Clean wood makes up about 28% of the C&D debris that is being disposed of. Other recyclable C&D materials that are being disposed of include scrap metal, clean gypsum, and asphalt shingles.

Figure 3-13 shows the composition of C&D materials diverted and disposed of in 2023 based on reports from private processing facilities, Ecology data, and waste monitoring at the division's transfer stations (Cascadia 2022). Most concrete, asphalt, and aggregates are source- separated for recycling at jobsites and are not reflected in these numbers. For more information on C&D debris collection and recycling see Chapter 4, *The Circular Economy*.

Figure 3-13. 2023 Construction and Demolition Materials Diverted and Disposed





Material	Tons Recycled	Proportion of Recycled Materials
Aggregates	341,092	47%
Asphalt Roofing	4	0%
Clean Wood	27,514	4%
Gypsum	79,793	11%
Metals	133,425	18%
Other*	148,744	20%
Total:	730,573	

Material	Tons Disposed	Proportion of Disposed Materials
Aggregates	55,520	7%
Asphalt Roofing	168,725	22%
Clean Wood	216,532	28%
Gypsum	55,131	7%
Metals	17,431	2%
Other*	264,123	34%
Total:	777,461	

*Includes mixed C&D debris, contaminants, painted and treated wood, and plastics

Tracking Progress

The division uses a wide range of available data, both qualitative and quantitative, to evaluate the success of waste prevention and recycling efforts. Over the years, SWD has developed a robust collection of surveys and data from a variety of sources to track progress. In most cases, more than one source of data is needed to accurately quantify how well the region is doing in diverting materials from the waste stream. For example, to track progress toward a target of 18.7 or fewer pounds of waste per employee per week (see Chapter 4, *The Circular Economy*), the number of employees in the service area for a given

year is divided into the annual tons of garbage generated by the nonresidential sector, as reported in customer surveys conducted at transfer stations and information submitted to the division by the collection companies. Using these data, pounds per week can be calculated. The targets are tracked using aggregate data for the service area, rather than using data by individual city or unincorporated area.

The division is also closely tracking efforts at the state level to develop a tool and methodology for tracking the amount of rescued edible food. Currently, there is no universal platform or requirement for organizations to report on the amount of food donated to feed people. The division has participated in statewide workgroups to identify these gaps and will continue to support implementation and data collection in this area of food waste prevention.

The following subsections provide information on the types of data collected, how they are calculated, and how reliable they are, as well as recommendations on how the data might be improved.

Tonnage and Transaction Data

An automated cashiering system is used to track data on the tons of garbage received and number of customer visits at division transfer facilities. In-bound and out-bound scales weigh loads for all vehicles except fixed-rate vehicles (as defined in KCC 10.04.020 MM), which are charged a minimum fee that assumes a weight of 320 pounds or less. These data are used to track overall garbage tonnage and transactions at individual stations. Data for recyclables accepted for a fee, such as yard waste, are also tracked by the cashiering system. For recyclables collected at no charge, data are provided to the division by the hauling company that is contracted to collect them.

Reports from the Contract Collection Companies

The private-sector companies that provide curbside collection of residential garbage and recyclables throughout most of King County submit monthly tonnage reports to the division. These reports are also provided to the cities. Data for single-family households are the most complete, providing the following monthly information for each city and for unincorporated areas operating under a Washington Utilities and Transportation Commission tariff:

- Tons of garbage disposed
- Tons recycled by material type
- Tons of organic materials recycled (yard waste, including food scraps for most areas)
- Number of garbage, recycling, and organics collection customers.

Generally, customer counts and tonnage numbers for single-family garbage, recycling, and organics are the most reliable because they are based on weights measured at the entrance scale of either County transfer stations (for garbage) or MRFs (for recyclables). To estimate the tons of individual materials (such as newspaper, aluminum cans, and other materials), collection companies take periodic random samples and determine the percentage of each material present in the loads. As overall recycling tonnage is weighed, tons for individual materials are allocated based on the percentages obtained in the random sampling. The County has worked with the haulers to develop and implement a standard

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protocol for sampling in order to provide reliable estimates of the recyclable and contaminated material components.

The same information provided for single-family residents is provided for multifamily residents and nonresidential generators; however, the per-capita data are less accurate because the number of apartment units and business customers is not provided. In some cases, the same truck collects multifamily and nonresidential wastes, so collection companies must estimate how much waste comes from each generator type. Even though some waste may be allocated to the wrong generator type, overall changes in recycling and disposal are reflected in tonnage totals, thereby providing a reasonable indicator of change.

Since nonresidential recycling collection is open-market and because many companies besides the large hauling companies provide commercial recycling services, a nonresidential recycling rate cannot be calculated from the collection company data. This means that an overall systemwide recycling rate cannot be calculated using these data alone.

Waste Characterization Studies

Since 1990, the division has conducted a Waste Monitoring Program to understand who uses solid waste system facilities, what materials they bring to the stations, how and why they use our facilities, and how satisfied they are with the services provided. To answer these questions, the division retains consultants to conduct both waste characterization studies and customer surveys that analyze the MSW received at County facilities for disposal at Cedar Hills. For these studies, the waste stream is examined by collecting and sorting sample loads delivered to transfer facilities in King County. These studies help the County and the cities understand the composition of both the overall waste stream and what is received from different types of generators, such as residents of single- family homes and apartments, nonresidential customers, and self-haulers. Separate analyses are conducted of the C&D debris and organics waste streams.

The waste characterization studies are designed to provide a statistically valid picture of what is being disposed of by the different generator types. Samples are taken over the course of a full year to account for seasonal variations. The sampling method is designed to ensure that all generator types and geographical areas are sufficiently sampled. The studies provide a high level of confidence of what is in the waste stream. Each study, described below, is conducted by the division as necessary to provide up-to-date information for planning purposes.

Solid Waste Characterization Studies

The most recent study of solid waste destined for Cedar Hills was conducted in 2022[16]. For this study, 391 randomly selected samples were collected on 31 sampling days. The waste stream was separated into 115 categories of material. For each material and generator classification, the study was designed to achieve a 90% confidence interval for the amount of waste disposed countywide. In other words, the

[16] https://your.kingcounty.gov/dnrp/library/solid-waste/Solid-waste-planning-monitoring/Solid-waste-monitoring/waste-characterization-study-2022.pdf

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study tells us that we can be 90% sure that the amount of cardboard disposed in 2022 was 4.3% (36,794 tons) of the total waste stream, plus or minus 0.5%.

The waste characterization studies are not designed to characterize each city's waste stream. However, based on sampling done in a variety of communities, the types of materials disposed of by residents are similar, while the amounts may differ. For example, jurisdictions with food waste collection programs will have lower percentages of food in their garbage than those without. These differences are reflected in the recycling rates and pounds disposed of per household for each jurisdiction.

In-person surveys are also administered to customers bringing materials to transfer facilities. Customers are asked about the types of wastes they are bringing, the origin of those wastes, reasons for self-hauling (rather than using curbside collection services), how often waste is self-hauled, and willingness to separate out various recyclable materials. These surveys provide a better understanding of the customers who visit the stations and, in turn, provide the proper levels of service. The surveys are also useful in informing programmatic decisions.

Customer satisfaction surveys are also conducted at the stations to evaluate the level of satisfaction with customer service and the disposal and recycling services provided at division facilities. The division uses this information to monitor its performance and identify areas where improvements can be made.

Organics Characterization Studies

Curbside yard waste collection services throughout King County accept food waste (food scraps and food-soiled paper), and the division is now working to measure how much food waste is actually collected from residential and nonresidential sources. Reports from the collection companies provide information about total tons of organics delivered to compost facilities, but do not differentiate between yard waste tons and food scrap tons. The solid waste characterization studies described above measure decreases of food scraps and food-soiled paper in the waste stream, but not whether the decreases result from curbside collection or from other diversion, such as home composting.

To improve SWD's ability to measure progress in organics recycling and establish achievable goals, the division is conducting periodic characterization studies of organics collected at the curb from single-family households. SWD conducted its fifth organics waste characterization in 2022[17], with plans to conduct studies every two to three years. The goal of this study was to measure the composition and variation of the organics waste stream and describe the flow of organics throughout King County in 2022. Characterizing organic waste is a crucial step in developing effective strategies to divert additional waste from landfills, while also minimizing contamination. In addition, compiling a complete picture of how organic waste flows throughout the county supports the effective management of County infrastructure, curbside collection programs, and commercial partnerships.

Construction and Demolition Debris Characterization Studies

[17] https://your.kingcounty.gov/dnrp/library/solid-waste/Solid-waste-planning-monitoring/Solid-waste-monitoring/organics-characterization-report-2022.pdf

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In 2001, the division began to conduct periodic characterization studies of C&D debris disposed at select private facilities by commercial and self-haulers, as well as small quantities delivered to division transfer stations by self-haulers. The studies measure the composition of C&D debris that continues to be disposed of instead of recycled. Four studies have been conducted to date, with the last study completed in 2025[18]. Information from the waste composition studies helped to inform what materials would be designated as readily recyclable under the new C&D debris recycling ordinance (see Chapter 4, *The Circular Economy* for more information).

Ecology Survey Data

The division receives data on tons recycled from the annual statewide survey of recycling companies conducted by Ecology. While the division chooses not to use this data for forecasting, it can supplement curbside collection data by including recyclables collected by private-sector companies across the region. Regulated recycling facilities are required by state law to report tonnage on the survey, which asks for tons by material type, by generator type (residential, nonresidential, or C&D), and by the county in which the materials were generated. For King County, companies are also asked if materials were generated in the City of Seattle.

Other than C&D data, the division no longer uses Ecology recycling data for the following reasons:

- Data from Ecology are not immediately available, with up to three-year lags before the County receives its recycling data
- Not all required recycling reporters submit the annual survey
- Data are self-reported by recycling companies, with few resources available to Ecology for checking accuracy
- Companies make unverified estimates about the county in which the recyclables were generated, and the reporting for data between King County and the City of Seattle has been inconsistent, resulting in tonnage variations from year to year that seem unlikely
- City-specific information, other than for the City of Seattle, is not available
- The identification of residential versus nonresidential sources is not reliable
- The identity of some companies that report data is confidential, limiting the ability to verify the quantities reported, and some of the companies with confidential data report only statewide totals, which requires the County to estimate allocation based upon population percentages
- Significant amounts of metal are reported; it is difficult to determine how much of this metal should be counted as MSW, how much as C&D debris, and how much as auto bodies, which the County does not include in its waste generation or recycling totals.

Improving the reliability of recycling data would greatly benefit our ability to evaluate progress in reaching county recycling goals. The division will work with haulers, Ecology, and the cities to explore

[18] https://your.kingcounty.gov/dnrp/library/solid-waste/Solid-waste-planning-monitoring/Solid-waste-monitoring/CD-characterization-study-2024.pdf

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voluntary agreements with material processing companies to improve data reporting and resolve data inconsistencies for key material commodities.

Planning Tools

To support overall system planning and determine appropriate rates, the division conducts focused studies to evaluate elements of the solid waste system and its operations, emerging technologies and industry challenges, and private-sector markets for recycling and reuse. The division will conduct additional planning studies as needed to explore a variety of topics, including best practices in solid waste management, alternative disposal technologies, and sustainable financing.

Major studies used in development of the Plan are listed in the following section. Plans or studies approved by Council action are noted.

Plans and Studies

- *2019 Comprehensive Solid Waste Management Plan* (KCSWD 2019) – This is the last adopted plan. The 2019 Comp Plan was approved by the King County Council in 2019.
- *Solid Waste Transfer and Waste Management Plan* (KCSWD 2006) – Provides recommendations to guide the future of solid waste management, including the renovation of the urban transfer system and options for extending the life of the Cedar Hills Regional Landfill. The plan was approved by the King County Council in December 2007.
- *Final Environmental Impact Statement for the 202x Solid Waste Comprehensive Plan update* (KCSWD 20XX) – Studies the environmental impact of the various policy decisions included in this update, including the long-term disposal decision.
- *Final Environmental Impact Statement for the King County Cedar Hills Regional Landfill 2020 Site Development Plan and Facility Relocation* (KCSWD 2022) – Identifies development alternatives for the landfill and facility relocation, outlines the environmental impacts of each alternative, and identifies potential mitigation measures, and recommends a preferred alternative.
- *Solid Waste Transfer and Waste Management Plan Review* (KCSWD 2013) – The division conducted this review in response to a budget proviso in Ordinance 17619. The purpose of the review was to assess transfer station options and resulting impacts to cost, service, and the environment. The recommendations helped inform changes to the plans for the Factoria, South County, and Northeast County recycling and transfer station projects.
- *Sustainable Solid Waste Management Plan* (KCSWD 2014) – Evaluates operational and strategic planning options and provides recommendations on implementation approaches. The study focuses on five areas: resource recovery at division facilities; C&D debris management; organics processing; disposal alternatives and technologies; and sustainable system financing.
- *Washington Material Concierge* (Full Circle Environmental et al. 2021) *ur*Sets out the recommendations for equitable business assistance and support for secondary material end markets that are central to a healthy and functioning circular economy for the region.

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- *Recycling Infrastructure in Washington State* (Cascadia and Herrera 2021) – The purpose of this research was to build a foundational dataset and visualization tool that can be expanded to additional materials or broader geographic scope in the future and, ultimately, enable better policy decisions for resource allocation to the recycling infrastructure system for paper and plastic and for community equity considerations.
- *Solid Waste Transfer and Waste Management Plan Review Part II* (KCSWD 2015) *u*'In response to Council Motion 14145, the division, in collaboration with all interested parties, continued to evaluate a mix of capital facilities and operational approaches to address system needs over time, including potential demand management strategies (such as peak-hour pricing or controlled access hours) that could motivate changes in how customers use transfer stations, thereby potentially reducing the need for added transfer station capacity in the northeast county.
- *Executive Proposed Solid Waste Disposal Fees and Rate Restructure 2023-2024* (KCSWD 2022a) – Rate study that examines four key inputs that determine solid waste disposal fees—financial assumptions, tonnage forecast, revenue and expenditures projections, and required target fund balance. Fees are calculated to ensure that revenues are sufficient to cover the costs of operations and services; funds are available for landfill closure and maintenance and capital investment projects for the transfer and disposal system; and a reserve Operating Fund balance is maintained. This study included the proposed rate restructure beginning in January 2024. The 2023-2024 Proposed Solid Waste Disposal Fees and rate restructure were approved by the King County Council in September 2022.
- *Executive Proposed Solid Waste Disposal Fees 2026* (KCSWD 2025) – Rate study that examines four key inputs that determine solid waste disposal fees—financial assumptions, tonnage forecast, revenue and expenditures projections, and required target fund balance. Fees are calculated to ensure that revenues are sufficient to cover the costs of operations and services; funds are available for landfill closure and maintenance and capital investment projects for the transfer and disposal system; and a reserve Operating Fund balance is maintained. The 2026 Proposed Solid Waste Disposal Fees were approved by the King County Council in September 2025.
- *Solid Waste Cost of Service and Rate Restructure Study* (FCS 2021) – The large majority of SWD revenues come from tipping fees on waste disposal. As cities and the division invest in waste reduction and diversion, this drives down that waste disposal revenue, putting upward pressure on the per-ton rate as the revenue the division needs to raise is spread across fewer and fewer tons. This FCS study completed a cost-of-service analysis for the various customer classes served by the division and explored three different rate structures for the County's major customer class: commercial and municipal solid waste haulers. This study was discussed with the division's advisory committees and was the basis for the rate restructure approved by the King County Council and implemented in January 2024.

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Evaluation of Technologies

- *Comparative Evaluation of Waste Export and Conversion Technologies Disposal Options* (R.W. Beck 2007*)* – Provides a planning-level assessment and comparison of various solid waste conversion technologies and waste export.
- *Anaerobic Digestion Feasibility Study* (HDR 2017*)* – Assesses the viability of several different scenarios using anaerobic digestion to process organic materials collected in King County.
- *King County Waste to Energy Study* (Normandeau 2017) – Evaluates waste-to-energy technologies and recommends the technology that best matches King County's circumstances.
- *King County Waste-to-Energy and Waste Export by Rail Feasibility Study* (Arcadis 2019) – Evaluates waste-to-energy and waste export by rail in handling the County's future disposal needs for the years 2025-2075.
- *Evaluation of Mixed Waste Processing Options* (RRS Consulting 2026) – Provides a planning-level evaluation of various mixed-waste processing strategies to support King County's waste reduction and resource recovery goals. The project report includes high-level considerations regarding possible implementation of select options.
- *King County Long-Term Waste Disposal Options Study* (Tetra Tech 2025) – Provides a comparative analysis of five different disposal technologies to inform the planning process for how to manage waste bound for disposal after the closure of the Cedar Hills Regional Landfill. Ultimately, the report highlighted two primary possibilities: Waste Export by Rail (WEBR) and Mass Burn with WEBR.
- *Municipal Solid Waste to Liquid Fuels Study* (EXP 2023) – Evaluates the feasibility of making Sustainable Aviation Fuel (SAF) from municipal solid waste (MSW). The study considered MSW volumes, waste compositions, technology options, facility and system partnerships and financing, and potential next steps. It concluded that King County does not produce enough MSW to support a cost-effective SAF production facility, and that the waste-to-fuel conversion technology is risky and unproven.
- *Food Waste Recycling Alternatives Analysis* (KCSWD 2024) – Analyzes the potential to develop commercial organics co-digestion in partnership with the King County Wastewater Treatment Division, including how the County can facilitate the diversion of food waste from the landfill; identify and implement the most beneficial use for processed food waste; and determine capacity requirements for co-digesting commercial food waste at the South Treatment Plant.

Waste Prevention and Recycling Studies and Plans

- *Re+ Strategic Plan* (KCSWD 2022b) – Provides details on the initial actions taken by SWD and its partners to reach zero waste of resources.
- *Sustainable Curbside Collection Pilot* (KCSWD et al. 2008) – Presents results of a pilot study to test the feasibility and public acceptance of every-other-week curbside garbage collection. Conducted in the City of Renton, the pilot study was performed in conjunction with Public Health – Seattle & King County and Waste Management, Inc., and was permanently implemented in 2009.

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- *2023 King County Geography-Based GHG Inventory Report* (Cascadia 2025a) and *2023 King County Consumption-Based GHG Inventory Report* (EcoDataLab 2022) – The division and the Executive Climate Office collaborated on a Geographic and Consumption Based Emissions Inventory for King County, as well as an inventory of consumption-based emissions from new construction in the building sector in King County. The geographic inventory looks at all greenhouse gas (GHG) emissions emitted in King County, including electricity produced outside of the county. The consumption-based inventory offers a more complete picture of the county's environmental footprint, taking into account emissions associated with the production and consumption of food, goods, and services, regardless of where they are produced. The report's findings show that efforts such as reducing food waste or purchasing sustainable and low-impact products can help to create a broader and deeper impact on global GHG emissions.
- *Optimized Transfer Station Recycling Feasibility Study* (Hererra 2013) – Evaluates methods to optimize County resources being dedicated to recycling activities at division transfer facilities.
- *Waste Monitoring Program: Market Assessment for Recyclable Materials in King County* (Cascadia 2015) – Helps identify opportunities and establish priorities for market development and increased diversion of recyclable materials from the waste stream. Data from the market assessment are used to guide the direction of future recycling programs and services recommended in this Plan.
- *2022 King County Waste Characterization and Customer Survey Report* (Cascadia 2023b) – Uses representative waste samples collected from the County's 10 disposal facilities to calculate statistically reliable estimates of the quantity and composition of waste in King County. Estimates are calculated for each method of waste collection and delivery (commercially collected or self-haul) and for each generator type (residential or nonresidential). Quantifying the amount of waste and the most common material types within each hauler type helps the County focus its diversion efforts appropriately. The objective of the MSW characterization is to provide robust composition data for King County's disposed waste.
- *2022 King County Organics Characterization Report* (Cascadia 2023) – Measures the composition and variation of the organics waste stream and describes the flow of organics throughout King County in 2022 to determine what materials make up the organics stream. Characterizing organic waste is a crucial step in developing effective strategies to divert additional waste from landfills, while also minimizing contamination. Moreover, compiling a complete picture of how organic waste flows throughout the county supports the effective management of County infrastructure, curbside collection programs, and commercial partnerships.
- *Materials Recovery Facility Assessment: Recyclables Characterization* (Cascadia 2020) – Assesses the effectiveness of Material Recovery Facilities (MRFs) that process recyclable materials from King County. The study characterized material that was delivered to MRFs from single-family, multifamily, and commercial sources, including nonrecyclable materials. The study also quantified and characterized the residual streams at each MRF, the amounts and types of processing outthrows (materials that are neither a detriment nor a benefit to the recycling process), and other contaminants in processed material and products.

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- *Cascadia Consulting Group: 2022-2024 Report: Materials Recovery Facility Assessment* (Cascadia 2024) – Assesses the composition of inbound and outbound materials at MRFs in King County with the primary goal of understanding the challenges and opportunities associated with MRF system performance and processing capacity.
- *Residential Curbside Characterization* (Cascadia 2018) – Analyzes residential waste composition and contamination, and generation rates, participation rates, and capture rates for the portion of the single-family population with curbside collection.
- *Cascadia Consulting Group: 2018 Customer Satisfaction Surveys* (Cascadia 2018a)– Summarizes the results of the 2018 self-haul and commercial customer satisfaction survey conducted at nine of the 10 King County solid waste disposal facilities in March and June of 2018.

Other Plans Considered

- *2021 Hazardous Waste Management Plan* (Hazardous Waste 2022) – Presents plans for managing hazardous wastes produced in small quantities by households and businesses and for preventing these wastes from entering the solid waste stream.
- *The State Solid and Hazardous Waste Plan: Moving Washington Beyond Waste and Toxics 2021 Update* (Cascadia 2021) – Presents the state's long-term strategy for systematically eliminating wastes and the use of toxic substances. The plan includes initiatives that focus on expanding the recycling of organic materials and expanding end markets for recycled products.
- *Strategic Climate Action Plan* (King County 2025) – Synthesizes King County's most critical goals, objectives, strategies, and priority actions to reduce GHG emissions and prepare for the effects of climate change. It provides a single resource for information about King County's climate efforts.
- *2024 King County Comprehensive Plan* (King County 2024) – The guiding policy document for all land use and development regulations in unincorporated King County, as well as for the establishment of Urban Growth Area boundaries and regional services throughout the county, including transit, sewers, parks, trails, and open space. Updates to the 2024 plan were adopted by the County Council in December 2024.
- *King County Equity and Social Justice Strategic Plan 2016-2022* (King County 2016) – The County's blueprint for change that will guide policies and decision-making, design and delivery of services, and workplace practices to advance equity.

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Chapter 4 – The Circular Economy

Policies

Goal	Achieve Zero Waste of Resources – Eliminate the disposal of materials with economic value by 2050 through a combination of efforts in the following order of priority: a. Waste prevention and reuse b. Extended producer responsibility c. Recycling and organics diversion d. Beneficial use Assess and develop options if selected actions are not enough to achieve zero waste of resources goal.
Goal	Use the following interim targets to measure the progress toward the goal of zero waste of resources by 2050: Generation rate target in 2038: a. Per capita: 19.2 pounds/week b. Per employee: 18.7 pounds/week Disposal rate target in 2038 a. Per capita: 7.1 pounds/week b. Per employee: 7.3 pounds/week Overall diversion rate in 2038: 64.3% a. Organics diversion rate target: i. Residential: 41.1% ii. Non-Residential: 22.1% b. Recycling rate target in 2038: 1. Residential: 24.5% 2. Non-Residential: 39.9% Construction and Demolition (C&D) targets in 2038: a. Generation per capita: 36.4 pounds/week b. Disposal per capita: 13.1 pounds/week
S-1	Prevent waste generation by focusing on upstream activities, including encouraging sustainable consumption behaviors, such as buying only what one

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	needs, buying durable goods, buying secondhand goods, sharing, reusing, maintaining, repairing, and repurposing.
S-2	Advocate for Extended Producer Responsibility (EPR), which requires producers to take greater responsibility for their own products and packaging and keep materials in circulation as long as possible.
S-3	Provide for efficient collection and processing of solid waste, recyclables, and organics, while protecting public health and the environment, reducing contamination, promoting equitable service, and minimizing materials sent for final disposal.
S-4	Set achievable performance measures for reducing waste generation and disposal and increasing recycling, composting, and reuse.
S-5	Enhance, develop, and implement waste prevention, recycling, and organics management programs that will increase diversion of waste from disposal, using a combination of tools: a. Infrastructure b. Education and promotion c. Incentives d. Mandates e. Enforcement f. Partnerships
S-6	Work with regional partners to find the most sustainable and highest-value end uses for reuse, recycling, and composted materials; support market development and develop circular supply loops to serve production need.
S-7	Strive to ensure that materials diverted from the King County waste stream for recycling, composting, and reuse are handled and processed using methods that are protective of human health and the environment.
S-8	Strive toward a future that prioritizes environmental stewardship by investing in multifamily recycling and fostering collaboration between the County and its residents.

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Summary of Recommended Actions

The following table includes a menu of recommended actions the County and cities should implement. Under the responsibility column, the entity listed first has primary responsibility for the action.

Action Number and Responsibility	Action	Detailed Discussion
Waste Prevention and Producer Responsibility		
1-s County, Northwest Product Stewardship Council Members	Pursue Extended Producer Responsibility (EPR) strategies through a combination of voluntary and mandatory programs for products that contain toxic materials, are difficult and expensive to manage, and/or need sustainable financing. These include but are not limited to carpets, thermostats, textiles, mattresses, tires, e-waste, and sharps.	
2-s County, Cities, Haulers	Support the implementation of EPR programs at the local level and ensure that the existing EPR programs continue to perform well.	
3-s Cities	Reduce consumer use of common single-use items. For example, promote reusable shopping and produce bags, reusable cups, and durable ware for on-site dining.	
4-s County, Cities	Work with food producers, grocers, restaurants, and schools to prevent food waste and to increase food recovery through donation of surplus meals and staple food items to local food banks.	
5-s County	Work collaboratively with cities and other interested parties to continue to develop competitive grant programs and community investments funded from the tip fee; refine grant performance measures and continue evaluating environmental, social and economic impacts of grant projects to make iterative improvements; these would be available to private entities, nonprofits, CBOs, NGOs, Tribes, cities, and other jurisdictions to support innovative programs that help meet plan goals.	
6-s	Provide regional education and outreach support, including incentive programs to overcome barriers for residents and businesses to	

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County, Cities	effectively prevent waste. Emphasize the primary importance of purchase and product-use decisions that prevent waste, and secondary importance of recycling or composting items/materials that could not be prevented. Work in partnership with all relevant partners to maximize the effectiveness of these efforts.	
Curbside Services – Recycling and Organics		
7-s Cities, County	Increase education, outreach and promotion to all generators of waste within King County's solid waste service area to encourage recycling, composting, and waste reduction, and to reduce contamination.	
8-s County, Cities	Continue to develop infrastructure and increase regional and local educational outreach, incentives, and promotion to increase composting of food scraps and food-soiled paper. These efforts should target single-family and multifamily residential developments, as well as nonresidential buildings, such as schools, institutions, and businesses.	
9-s County	Work with public and private partners to support the development of reuse and recycling value chains, including markets, for target products and materials. Employ incentives and material-specific projects that reduce or eliminate barriers to reuse and recycling.	
	Residential	
10-s Cities, County, Haulers	Increase food scrap recycling and reduce contamination in multifamily and single-family organics streams through outreach, including educational cart-tagging and other tools.	
11-s County, Cities, Haulers	Amend the designated recyclables list and service provisions for recycling to align with the statewide list and plan under the EPR program.	
12-s County, Cities, Haulers	Ensure single-family and multifamily minimum collection standards and services are provided across King County, particularly a consistent service across unincorporated King County.	
13-s County, UTC/Haulers	Pursue improvements to residential collection services in the unincorporated area to increase the recycling and composting rate.	

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	Single-Family	
14-s County	Work closely with internal and external partners, including the Vashon/Maury Island community, to ensure curbside and transfer station recycling services on Vashon align with collection service standards across unincorporated King County.	
	Multifamily	
15-s Cities, Haulers	Explore options to balance affordability, operational efficiency, and reuse and recycling outcomes in curbside and multifamily bulky item collection services.	
16-s Cities, County	Implement best practices at multifamily complexes to increase participation and reduce contamination in recycling and composting programs.	
17-s County, Cities	Propose an approach and minimum service standards for organics collection from multifamily properties consistent with Washington State Organics Management Laws.	
18-s Cities, County	Promote environmental stewardship by strengthening recycling and organics participation in multifamily communities.	
	Nonresidential (businesses, schools, etc.)	
19-s County	Provide waste prevention, recycling, and composting education programs in schools throughout the county, and help K-12 schools and school districts establish, maintain, and continuously improve the programs.	
20-s Cities, County	Expand technical assistance to food service businesses to divert food waste and explore food waste reduction opportunities.	
21-s County	Develop enforcement system to ensure business compliance with relevant state Organics Management Laws and County Code.	
Construction & Demolition Materials Recycling		
22-s County, Regulators (Public Health, City	Explore options to increase the diversion of C&D material from disposal in the landfill, particularly for wood, metal, cardboard, asphalt shingles, carpet, and gypsum wallboard.	

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of Seattle, UTC, Ecology), Building industry partners, Haulers, C&D Designated Facilities		
23-s County	Support the development of a salvage lumber warehouse and circular economy business park.	
24-s County	Establish a community-based deconstruction and rebuild program.	
25-s Cities, State Building Code Council, County, C&D industry partners	Work collaboratively with cities to implement building codes that require compliance with C&D material recycling and handling requirements contained in County Code. Provide outreach/promotion for city permitting and enforcement staff.	
26-s County, C&D industry partners	Increase regional recycling of C&D materials through updating policy action, and education on and enforcement of C&D materials recycling requirements.	
27-s County, C&D industry partners	Ensure that C&D material is managed in an environmentally sound and socially responsible manner by privately owned landfills via enforcement of C&D debris handling requirements contained in County Code.	
King County and City Collaboration, Operations, and Policy		
28-s County, Cities	Lead by example by improving waste prevention and recycling in public-sector operations, procured services, and facilities, and at sponsored events, as well as through the purchase of sustainable products.	
29-s	Explore and pursue options to further the circular economy, including increases in reuse, recycling, composting, and resource recovery from	

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County	generators, and at transfer stations through innovative methods and technologies.	
30-s County	Explore and develop an effective system of compliance and enforcement for material management as more material is diverted from the waste stream.	
	City Collaboration and Technical Assistance	
31-s County	Continue to support the cities' high-impact implementation measures of the Comp Plan through the Waste Reduction and Recycling (WRR) and Re+ city grant programs, in addition to allocating Local Solid Waste Financial Assistance (LSWFA) funds from the Washington State Department of Ecology. The County should strive to maintain the proportion of population-based funding to cities, increasing waste reduction and recycling grant amounts as LSWFA funding decreases; and should revise or amend grant criteria to reflect priority Comp Plan actions.	
32-s County	Continue developing options and explore more ways to help cities transition away from recycling collection events as enhanced material collection and recovery services are provided at renovated transfer stations, improved bulky item collection becomes available and cost-effective curbside, and product stewardship programs emerge.	
	Green Building	
33-s County, Cities, State Building Code Council, Building Industry Partners	Adopt green building policies, codes, and regulations that support the design of buildings and structures that are carbon-neutral, integrate equity and social justice, are energy efficient, and use lower-embodied carbon materials, such as recycled materials.	
34-s County, Cities	Assist cities in developing green building policies, codes, and practices; provide education and outreach on green building practices; encourage green building through Leadership in Energy and Environmental Design (LEED), Built Green, Living Building Challenge, Envision, and other certification programs.	

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35-s County	Provide technical assistance to city- and County-owned projects to implement deconstruction requirements, building reuse, and reuse of building materials.	
36-s County, Cities, State Building Code Council, Building Industry partners	Update and enforce building code requirements to ensure adequate and conveniently located space for garbage, recycling, and organics collection containers in multifamily, commercial, and mixed-use buildings.	

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The Circular Economy

Every product we use originates from raw materials. These materials, along with the goods and foods produced from them, are often extracted, manufactured, or sourced from outside King County, yet ultimately enter our local waste stream. As a result, the choices we make about materials have consequences that extend far beyond county borders.

As demand for food, energy, transportation, and other goods rises with a growing population and higher living standards, so do the pressures on our natural environment. To meet these challenges, King County residents and businesses must work together to address climate change and to advance a more equitable future for all.

The primary goal of materials management is to create a circular economy where waste is minimized, materials remain in use longer, and resources are recovered to be used in new processes and products. This approach reduces emissions, decreases the need for virgin materials, and regenerates natural systems. It encompasses not only the principles of reducing, reusing, and recycling but also improvements in design and production, informed purchasing decisions, and transforming how products are managed at the end of their life cycle.

Envisioning a Circular Economy in King County

At home, at work, on the move, and in the community, materials are central to people's daily lives. The planet's raw materials are the basis for all the products that improve the quality of life, the food that nourishes communities, and the services that businesses provide to the economy. Products used daily consume finite resources and energy to produce; their disposal results in significant loss of valuable materials and incurs high human, environmental, and climate costs.

A systemic shift is needed to transition from a linear "throwaway economy" to a circular economy that prevents waste, makes better use of valuable materials, and centers the communities most affected. The County is committed to achieving a circular economy, where waste is minimized and resources—including materials, water, and energy—are recovered. This approach reduces GHG emissions and regenerates natural systems.

Goals and Targets

The goal and targets for waste prevention and resource recovery were established through extensive discussions with the division's advisory committees: the Solid Waste Advisory Committee (SWAC) and the Metropolitan Solid Waste Advisory Committee (MSWAC). The countywide goal and targets are intended to improve the effectiveness of established waste prevention and recycling efforts. The recommended actions for implementation presented at the beginning of this chapter were developed to provide general strategies for meeting the goal and targets and to identify the agency or agencies that would lead those efforts. They are intended to serve as a guideline for the County and cities and do not preclude other innovative approaches that may be implemented to help achieve the goal and targets.

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In addition to waste prevention and resource recovery, other factors can increase or decrease the overall amount of waste generated. For example, the 2007 economic recession resulted in significant, unanticipated reductions in garbage collected, stemming primarily from the drop in consumer spending and business activity in the region. Similarly, before the COVID-19 pandemic, generation of nonresidential garbage was higher than residential garbage. During the pandemic, many businesses closed or reduced activity, which resulted in residential garbage exceeding nonresidential. When establishing the goals, targets, and measurements for success, it is important to consider the economy, policy changes, and other factors that may be in play.

Waste Prevention and Recycling Goal and Targets

Overall Waste Prevention and Recycling Goals

The division calculated generation and disposal targets based on current forecasts for garbage, recycling, and organics tonnage. These forecasts come from data on disposed tonnage at Cedar Hills Regional Landfill (Cedar Hills), curbside collection of recycling and organics, recycling and yard waste materials disposed of at King County's transfer stations, and special recycling programs for paint, health and hazardous waste collection, and electronics (e-cycle).[19] Existing Re+ actions are factored into the forecasts, including Sort It Out (efforts to increase recycling at transfer stations), expanded organics collection, extended producer responsibility, and mixed-waste processing.

The overall diversion rate is calculated by taking all recycling and organics tonnage forecasted for 2038 divided by the total recycling, organics, and garbage tonnage projected to be generated in the county's service area. The recycling rate targets for residential and nonresidential tonnage are calculated based on the tons of curbside recyclables collected for each respective sector and tonnage from the special recycling programs named in the paragraph above.

Residential recycling also includes self-haul recycling tons brought directly to transfer stations. Total tons recycled are then divided by total tons generated, which includes tons disposed, composted, and recycled. Organics diversion targets are similarly calculated using commercially hauled organics tonnage and yard waste deposited at transfer stations divided by the total tons generated.

Interim Targets on the Way to Zero Waste 2050

Generation and Disposal Rate Targets

		2024	**2038**
Generation Rate Target	Per capita (lbs. per week)	21.4	19.2
	Per employee (lbs. per week)	21.0	18.7
	Per capita (lbs. per week)	12.5	7.1

[19] The generation and disposal targets in this report do not include C&D tonnage.

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Disposal Rate Target[20]	Per employee (lbs. per week)	13.4	7.3

Diversion Rate Targets

		2024	**2038**
Overall Diversion Rate		39.8%	64.3%
Recycling Diversion Rate Target	**Residential**	16.2%	24.5%
	Nonresidential	28.8%	39.9%
Organics Diversion Rate Target	**Residential**	25.4%	41.1%
	Nonresidential	7.7%	22.1%

Construction and Demolitions Rate Targets

	2024	**2038**
C&D Generation per capita (lbs. per week)	38.8	36.4
C&D Disposal per capita (lbs. per week)	14.5	13.1

Figure 4.1 below shows the projected trend line in pounds per capita of residential waste disposed that would result in the county achieving the Zero Waste of Resources Goal by 2050. Achieving zero waste of resources means that all recoverable materials must be diverted from the disposal waste stream. The most recent Waste Characterization Study commissioned by the division in 2022 estimated that 67% of waste disposed of was recoverable. To arrive at the forecast to zero waste by 2050, we factored in additional Re+ actions that will ramp up diversion between 2035-2040 in organics, including food, wood and other yard waste, as well as paper, plastic, and metals. The division estimates that an additional 150,000 tons in recoverable materials can be diverted from the landfill each year by 2040, putting us on track to achieve zero waste of resources by 2050.

[20] These disposal rate targets are distinct from the SCAP goals. SCAP only used commercial hauler data to estimate curbside MSW collected. This analysis considers all waste disposed at CHRLF and applies the residential and nonresidential splits from the most recent Waste Characterization Study to calculate total tonnage disposed per capita and per employee.

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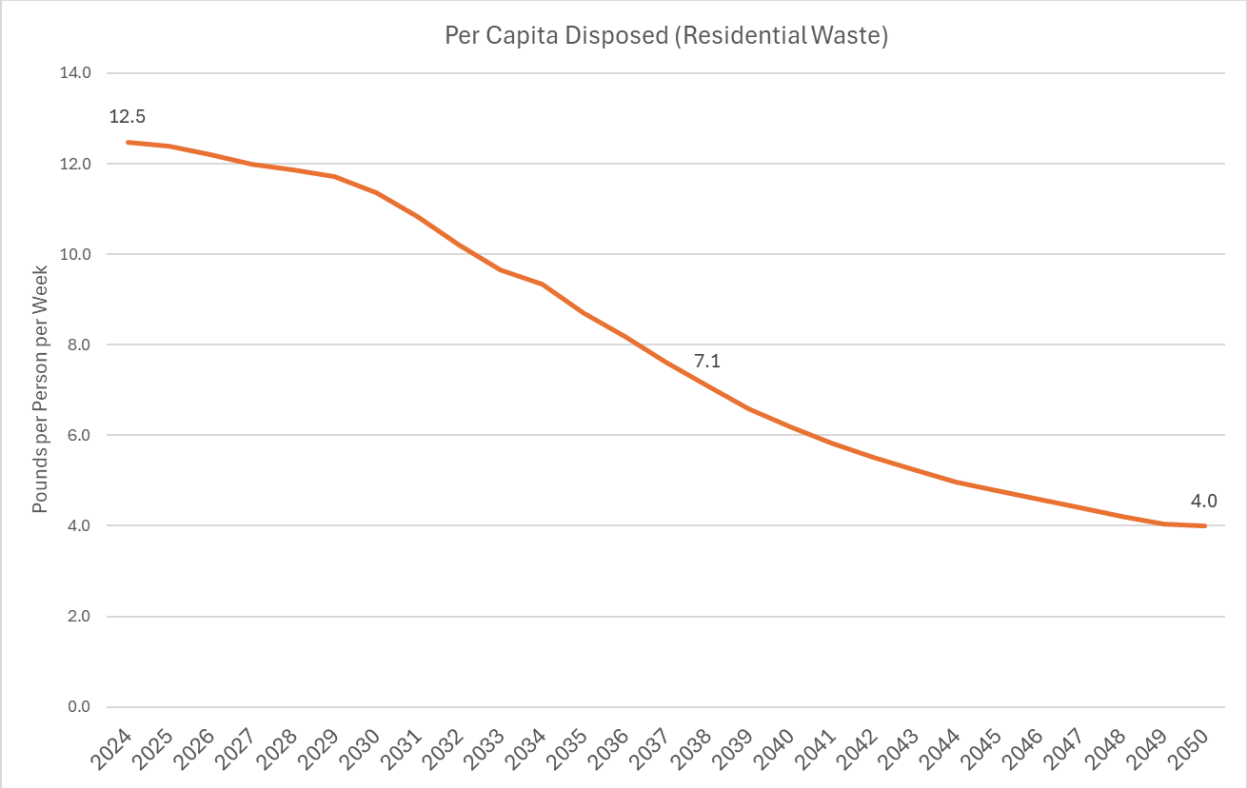
Figure 4-1. Residential Waste: Pounds Disposed Per Capita Projection to Zero Waste in 2050



Establishing waste prevention targets and measuring success in achieving them is a challenge because data quantifying the amount of waste not generated is difficult to obtain. However, by tracking overall waste generation (tons of material disposed plus tons recycling and organics) over the years, King County can attempt to identify regional trends in waste prevention. A decline in waste generation means that the overall amount of material disposed of or recycled, or both, has been reduced. The County also uses data from reuse and repair, building salvage, commercial food waste prevention grants, catalog/junk mail/phone book opt-outs, and material efficiencies spurred by product stewardship to help determine whether progress is being made in waste prevention.

Recycling will continue to be an important strategy to reduce the disposal of solid waste. The recycling and organics diversion goal combines single-family, multifamily, nonresidential, and self-haul recycling activity. It addresses the amount of waste being diverted from disposal at Cedar Hills to recycling and organic waste diversion through composting. It does not include C&D debris (which has separate recycling goals) or other wastes, such as car bodies, which are not typically handled through the County system. In 2023, the countywide diversion rate over five years was 42%.

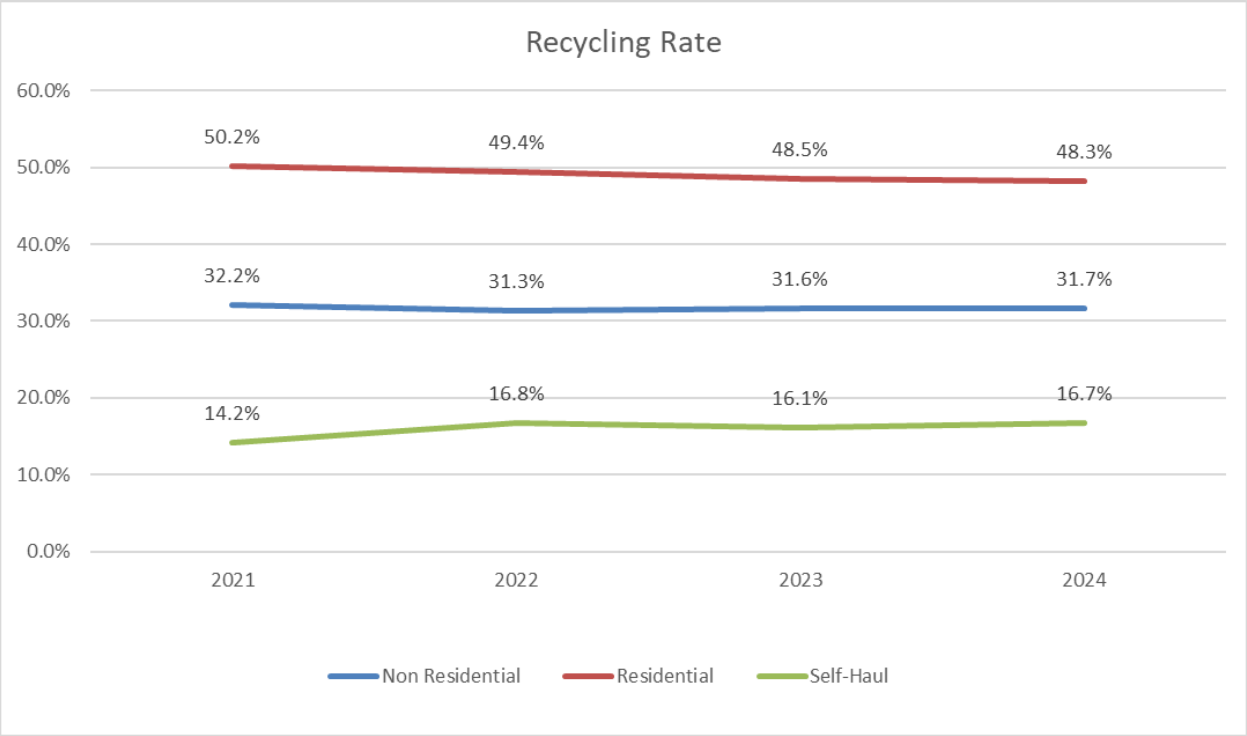
The goal for this planning period reflects the estimated recycling rate achievable if the recommended strategies in this plan are fully implemented.

What is Your Recycling Rate? It Depends on What You Count

Currently, there are no state or national standards for what should be counted in the "recycling rate" for a city or county. As a result, recycling rates reported by jurisdictions include different materials. The division has chosen to calculate King County's recycling rate based on the known amount of material diverted from disposal at Cedar Hills. It does not include materials such as C&D debris or car bodies, which are handled largely by the private sector. Many of these materials are very heavy and can considerably increase the recycling rate based on tonnage. The division also does not include any estimate of waste prevention, primarily because of the lack of measurable data. Given the various methods for calculating a recycling rate, it is important to understand which materials are being counted before comparing rates across jurisdictions.

As shown in Figure 4-2, the recycling rate has remained relatively stable, even as waste generation has increased in recent years. The role of individual cities will be critical in increasing these rates to reach countywide waste prevention and recycling goal and targets.

Figure 4-2. Recycling Rate over the Past Four Years



Tools Used to Meet the Recommended Goal and Targets

The division and the cities have various tools available to promote waste prevention and increase recycling and organics diversion. Table 4-1 below identifies these tools and cites and describes some of the successes achieved through their use.

Table 4-1. Successes using various tools.

Tool	Application	Successes
Infrastructure	Establishing the collection and processing infrastructure is always the first step. It can be accomplished through enhanced curbside collection services, additional recycling options at transfer facilities, and partnerships with private-sector processing facilities and manufacturers/retailers.	New transfer facilities are being designed with dedicated areas for receiving and processing recyclable materials such as cardboard, yard waste, clean wood, and scrap metal. Approximately 99% of single-family curbside collection customers have access to collection service for food scraps and food-soiled paper, along with yard waste. Through E-Cycle Washington, electronics manufacturers have developed a statewide network of locations for recycling televisions, computers, and monitors. Likewise, LightRecycle Washington established a network to collect and recycle mercury-containing lights, and PaintCare offers drop-off sites where the public can take leftover paint for recycling or responsible disposal.
Education & Promotion	Educational programs and targeted advertising play key roles in initiating new programs and sustaining the momentum of existing programs. These efforts can be tailored to specific waste generators or materials.	The division's Green Tools team provides education, resources, and technical assistance for managing C&D debris as a resource rather than waste. (For more information, visit https://kingcounty.gov/en/dept/dnrp/buildings-property/green-sustainable-building/green-building) King County's CompostWise program provides education, resources, and technical assistance to teach the public about the benefits and uses of compost, helping develop new end markets. (For more information, visit https://kingcounty.gov/en/dept/dnrp/waste-

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		services/garbage-recycling-compost/solid-waste-programs/compostwise) After the passage of state Organics Management Laws, King County and cities launched educational campaigns to help businesses start composting service. Many cities provide assistance to businesses to establish and maintain recycling programs. EnviroStars' Green Business Program is a free program that offers rebates, resources, and incentives to businesses that take action to protect the environment and employee health and safety. Bellevue, Kirkland, and King County are founding members. (For more information, visit https://envirostars.org/)
Incentives	Incentives encourage recycling. For example, in a pay-as-you-throw (or variable rate) type program, if a customer generates less garbage, they need a smaller garbage container, which means a lower charge on their garbage bill. Incentives can also take the form of a give-away item that makes waste prevention and recycling easier.	To encourage waste prevention and recycling, curbside garbage collection fees increase with the size of container, creating a pay-as-you-throw system. Some cities provide kitchen containers and sample compostable bags to encourage residents to recycle their food scraps.
Mandates	Mandates that restrict the disposal of specific materials have proven effective in increasing recycling, particularly when there is a developed recycling market for those materials. Mandates can be legislated at the local, state, or federal levels, or implemented through city	Yard waste has been prohibited in curbside garbage since 1993. In 2005, fluorescent lights and many electronics were prohibited from disposal at King County transfer stations to encourage recycling. To increase recycling, starting in 2018, the division began prohibiting self-haulers from disposing of cardboard, metal, yard waste, and

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	contracts. Staff engage with both industry partners and the public when these policies are being considered.	clean wood at transfer stations that provide recycling services for these materials. In 2026, the division banned these materials from stations that do not provide recycling, requiring self-haul customers to divert the materials via recycling pathways at other stations. To increase organic waste diversion, beginning in 2030, state law requires all single-family households and commercials businesses to have organic waste collection service if they are located in urban areas with established service providers.
Enforcement	Enforcement of King County Code Title 10 Solid Waste and the King County Waste Acceptance Rule (PUT 7-1-6-PR) helps ensure that materials are recycled or disposed of properly.	Outreach and citations carrying progressive fines are issued to violators to encourage compliance with code provisions and public rule policies. Using these tools, customers of all types learn how the materials should be handled and are held accountable to use the solid waste system appropriately. The division also recovers costs from violators for loads that require environmental cleanup and excessive staff time to coordinate a response. The C&D materials diversion program has one full-time employee dedicated to enforcement of the recycling and disposal rules for C&D materials.
Partnerships	Partnerships help amplify programs by bringing in other organizations or agencies through program assistance and promotion.	The division participates in several regional and national efforts, including: • Furthering extended producer responsibility goals through partnerships with the Northwest Product Stewardship Council. • Food waste prevention, reduction, and rescue through the Pacific Coast Food Waste Commitment, a public/private partnership. • Working as a founding member of the U.S. Plastics Pact, which connects diverse public-private entities across the plastics

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		value chain to rethink the way we design, use, and reuse plastics, to create a path to a circular economy for plastic. • Promoting sustainable packaging through the Sustainable Packaging Coalition, whose mission is to bring interested parties together to catalyze actionable improvements to packaging systems and lend an authoritative voice on issues related to packaging sustainability. • Collaborating with the Upstream Government Reuse Forum, a dedicated space for government representatives to discuss policy solutions related to reuse. • Participating in NextCycle Washington, a business accelerator program that connects entrepreneurs, companies, and communities to technical support, financial resources, and capacity-building for projects focused on waste prevention and material recycling, recovery, and reuse.

Re+: Re-imagining a Waste-free Future

In 2022, King County, its cities, and community partners worked together to create the Re+ Program to address climate impacts from solid waste, support more community participation in new resource recovery work, and advance the County's Zero Waste of Resources goal (King County Code 10.14.020). Re+ (pronounced "re-plus") is a re-imagining of our regional solid waste system from one that is disposal-based to one that is focused on reduction, recovery, recycling, and regeneration.

The Re+ approach encompasses a series of coordinated actions that keep materials with economic value in circulation and out of the landfill, while building an equitable system that centers on community needs. Through Re+, the County is strengthening its waste prevention and reduction strategies, developing innovative pathways to connect recovered materials with viable end markets, and engaging frontline community members in shaping the system. Together, these efforts bring the municipality closer to its vision of healthy, safe, and thriving communities in a waste-free King County.

Re+ Actions

King County's goal of achieving a zero waste, equitable, and circular economy requires that the full lifecycle of products and materials are examined to identify opportunities to close loops. Guided by core principles, King County developed Re+ strategies that are thorough, inclusive, and impactful, outlining pathways to reach the zero waste of resources goal and shaping the foundation of Re+

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Actions. These actions are coordinated efforts across each stage of a product's lifecycle, created through a task force of King County staff, city partners, regional solid waste service providers, and local nonprofits.

Actions

Extended Producer Responsibility (EPR) for Packaging and Paper Products – EPR requires companies that make consumer products to fund the residential recycling system and ensure their packaging and paper products get recycled. The division supported the adoption of a statewide EPR program for packaging and paper products, which resulted in the passage of the Recycling Reform Act in 2025. The division will continue to support implementation to ensure a successful program launch in 2030 and beyond.

Statewide Organics policy legislation and implementation – The division supported successful statewide Organics Management Laws passing in 2022–2025, which include several measures to ensure food and yard waste is kept out of landfills. Staff will continue to support the implementation of these laws through outreach, technical assistance, and enforcement.

Single-Family Organics Collection – This program ensures that as many residents as possible have access to organic waste services, such as curbside compost bins, by optimizing services for food and yard waste collection for all single-family households in King County. The division will update the County Code to require organics diversion at all single-family households in King County.

Nonresidential Organics Recycling – Providing technical support to local businesses to help them keep their organic waste out of the landfill and manage it as a resource. King County supports businesses in complying with the statewide Organics Management Law requirements and will continue to explore implementation of enforcement mechanisms via the SWD or Public Health, as outlined in the state law.

Re+ Community Panel – Bringing together diverse communities and voices to chart a path toward a more equitable, waste-free King County. The first iteration of the Re+ Community Panel, consisting of 12 diverse community members, wrapped up at the end of 2025. The resulting panel insights and recommendations—which address programming, policy, collaboration, strategy, and more—have greatly improved equitable Re+ Action implementation. Building on the shared learning of this panel will help inform a broader community engagement plan and options for future Re+ community engagement.

Re+ Circular Economy Grants – Stimulating the waste-free economy through inclusive and equitable grants that support market development for circular economy projects.

Circular Economy Business Innovation Development (NextCycle Washington) – Providing technical assistance, mentorship, and resources to organizations and communities developing innovative materials management solutions through Washington State's NextCycle circular economy business accelerator and grant programs.

Re+ City Grants – Providing grant funding for King County cities to implement innovative zero waste and recycling programs.

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City/County Collaboration – Increasing collaboration between King County and its cities to reach shared goals of waste reduction, reuse, recycling and composting.

Mixed Waste Processing – Evaluating mixed waste processing (MWP) as an approach to recover recyclables that are mistakenly disposed of. Beginning in 2024, the division began working with a consultant to evaluate options for MWP in the region's garbage infrastructure. MWP may include, but is not limited to, screens, magnets, conveyers, optical sorters, robotics, eddy currents, and liquid-based processes to separate resources from garbage. MWP vendors and operators claim resource recovery rates over 60% from MSW. MWP is generally considered a "last screen" to capture resources before final disposal. It is not meant to replace existing upstream recycling systems. MWP may be a valuable resource recovery strategy when it's designed to target materials that aren't diverted by existing outreach and/or regulatory diversion approaches.

Salvaged Lumber – Diverting clean wood from King County transfer stations for collection, salvage, and reuse. A new Salvaged Lumber Warehouse opened in 2025, and the division continues to collaborate with the City of Seattle and other partners to develop the infrastructure for a circular wood ecosystem.

Shoreline Reuse Area – The division is piloting collection of reusable building materials outside the Shoreline Transfer Station in partnership with Second Use Building Materials. From August 2024 to September 2025, Second Use collected and reused more than 2,000 items weighing about 40 tons, including dimensional lumber, wood fencing, doors, and other materials, such as windows, cabinets, fixtures, and lighting, demonstrating the feasibility of alternative material collection at SWD facilities.

Transfer Station Pallet Reuse Pilot – The division piloted the collection of intact, reusable pallets in partnership with Rainier Wood at Enumclaw and the Shoreline Recycling & Transfer Station. Launched in 2023, this pilot ended in summer 2025 due to operational challenges and weak markets for pallet reuse. The division continues pallet repair and reuse outreach with handouts at Bow Lake Transfer Station to customers delivering trucks full of pallets.

Multifamily Recycling & Composting – The division is working to support organics service requirements for multifamily residences throughout the county through code updates, technical assistance, contamination reduction outreach, and new technology pilots. This work aligns with state Organics Management Law requirements to plan for and implement multifamily organics service requirements.

The Future of Re+ – Re+ is a transformative program of different projects and actions. The initial strategic plan in 2022[21] was intended to start the journey. As the division refocuses efforts to make the new zero waste of resources target of 2050 a reality, new actions and materials will continue to be

[21] https://cdn.kingcounty.gov/-/media/king-county/depts/dnrp/waste-services/garbage-recycling-compost/solid-waste-programs/re-plus/documents/re-plus-plan.pdf?rev=16d0ca68a12b424daec4923a22c54422&hash=6BEC0F930DAE3E06B0E2ED4326E4F24F

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incorporated into the Re+ program. The division may also consider other technologies, such as anaerobic digestion or demonstration projects of other evolving technologies that promote resource recovery, as ways to recycle or reuse materials. Improving the diversion of materials not included in the initial Re+ Strategic Plan will help the division meet its diversion goals.

Waste Prevention and Reuse

The division engages in a variety of programs, campaigns, and partnerships with the goal of keeping materials in circulation, preventing waste, and increasing the use of durable materials. Below are some examples of current programs and strategies:

Food: Too Good to Waste

Since 2012, King County's food waste prevention program educates consumers on ways to prevent the waste of edible food. When food is wasted, not only does it generate large amounts of methane at the landfill, but it also wastes all the water and energy used to produce, package, and transport it from farm to table. About 12% of the residential garbage disposed of at Cedar Hills is edible food, representing a significant opportunity to reduce waste. The division partners with key organizations operating within food systems, such as hunger relief organizations, food banks, and farmers markets.

To achieve the statewide goal to reduce edible food waste by 50% by 2030, the division will pursue programming and partnerships in residential and commercial sectors that center upstream strategies of prevention and rescue.

Eliminating problematic or unnecessary substances, materials, and products

The division is engaged in different approaches to design out waste, toxicity, and obsolescence. The division supported the 2021 Plastics Law that reduces the use of single-use items by restricting restaurants and food service businesses from automatically providing single-use food service-ware with customer orders and prohibits the sale and distribution of several types of expanded polystyrene (EPS), such as packing peanuts and foam food-service products. The division also supported passage of laws that ban single-use plastic bags from grocery stores, reduce plastic pollution from floating docks using polystyrene foam, require water bottle refill stations wherever a drinking fountain is required in all new buildings, and require hotels to eliminate single-use plastic toiletries. The division is working on ways to prohibit the use of toxic substances found in products, such as PFAS, 6PPD in tires, and lead in cookware.[22] The division supported the phasing out of most mercury-containing lights in the HB 1185 legislation as more-efficient alternatives exist.

[22] PFAS, short for per- and polyfluoroalkyl substances (also known as "forever chemicals"), are a large group of man-made chemicals that persist for very long periods of time in the environment, including human bodies. Emerging research shows that PFAS can have several detrimental impacts to human health. 6PPD, a chemical used in tires to prevent cracking, breaks down to 6PPD-quinone, a highly toxic substance known to quickly kill aquatic life. Lead is a heavy metal neurotoxin which can cause cardiovascular and gastrointestinal issues and permanent brain damage.

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The division also advances this work through partnerships. The division is actively engaged in the U.S. Plastics Pact, a consortium of companies, governments, nonprofits and public-sector organizations committed to achieving the following targets to address plastic waste:

1. Eliminate problematic or unnecessary plastic packaging and reduce the use of virgin plastic
2. Design all plastic packaging to be reusable, recyclable, or compostable
3. Recycle or compost 50% of plastic packaging
4. Use an average of 30% recycled content or responsibly sourced, biobased content in plastic packaging
5. Identify viable reusable packaging systems and increase their implementation

Recycled Content

To increase the demand for recyclable materials, the division has supported post-consumer recycled content requirements for plastic beverage containers, household cleaning and personal care product containers, and trash bags in the 2021 Plastics Law. Producers must use a minimum amount of recycled plastic in these products, which, in turn, will stimulate demand for recycled material. The single-use plastic bag ban also includes requirements that paper bags and reusable plastic bags must use recycled material. Procurement policies can set greater recycled-content requirements, such as the County's ordinance that mandates 100% recycled paper for copy and print paper.

Repair Events

Since 2016, King County's free community repair events program has reduced waste, conserved resources, and helped build community. It has also directly inspired the creation of similar repair event programs across Western Washington. This program has held 96 repair events in 28 different cities and communities in King County. At these events, people bring household items, including small appliances and electronics, toys, tools, small furniture, clothing and much more, to be repaired and mended. Skilled volunteer "fixers" successfully repair more than 70% of the items they work on, educating the public about waste prevention in the process.

Tool Libraries

The division supports and connects tool libraries and assists with tool library startup efforts. At a tool library, instead of buying a tool or kitchen equipment that is seldomly used, community members are able to borrow it. Tool libraries are operated by nonprofits. King County now has four tool libraries outside Seattle, in Auburn, Federal Way, Shoreline, and on Vashon Island. Both tool libraries and repair events directly prevent waste, conserve resources, and save residents money by reducing unnecessary purchases.

Bring Your Own Cup

The division also works with Department of Ecology (Ecology) and cities to reduce the use of single-use cups through Bring Your Own Cup (BYOC) campaigns by raising awareness among food business

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customers that bringing their own reusable cups when visiting coffee shops and other food businesses should be the norm. The division is actively engaged in efforts to help people, businesses, and communities shift from single-use to reuse through Upstream's Reuse Solutions Network and the U.S. Plastics Pact Reuse Workstream.

Extended Producer Responsibility

Extended Producer Responsibility (EPR) is a mandatory type of product stewardship where companies are required to take responsibility for the end-of-life management of their own products. EPR legislation has been implemented successfully at the state, national, and international levels to divert waste from the landfill and increase recycling. In this model, companies—not government or ratepayers—finance and manage the collection, recycling, and/or proper management of their products at the end of the product's life cycle.

The division is on the steering committee of the Northwest Product Stewardship Council (NWPSC) and has been participating in the development and implementation of EPR policies in Washington state.

The division and the NWPSC were instrumental in getting state legislation adopted to implement statewide producer responsibility programs, such as E-Cycle Washington (electronics), LightRecycle Washington (mercury-containing lights), Safe Medication Return (unused drugs), PaintCare (paint), Battery Stewardship (batteries), and the Recycling Reform Act (packaging and paper products). All programs provide a collection network (including drop-off sites, mail-backs, events, etc.) for residents to return covered products to be recycled or disposed of responsibly. The division continues to work with these state programs to ensure they are meeting goals and sufficiently serving the King County community.

The division and the NWPSC plan to continue advocating for EPR programs for additional products and for improvements to current programs to ensure convenience, equitable services, and efficiency. Some future products that could be managed through EPR are sharps, mattresses, household hazardous waste, textiles, carpets, and tires, among other items.

Besides the NWPSC, the division is also part of national collaborative networks, such as the Product Stewardship Institute (PSI) and the Stewardship Action Foundation, that develop, promote, implement, and evaluate EPR policies and programs throughout the United States. These networks bring together U.S. state and local governments, businesses, environmental organizations, and other key players who share information and expertise that help the adoption of EPR laws in Washington state.

Curbside Service – Recycling and Organics

This section describes the division's programs, plans and processes for increasing diversion via curbside recycling and organics service.

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Recycling outreach

- The Recycle Right Communications Consortium is a collaboration between King County, cities, Ecology, and solid waste service providers, to create unified educational campaigns. The group has also designed outreach campaigns for Recycle Right (reducing contamination), Compost Right, Value of Recycling, Paint Recycling, and plastic bag recycling.
- *The Recycle More ır It's Easy to Do* campaign promotes basic recycling of curbside materials, food scraps, and yard waste.
- *What do I do with...?* Over 300,000 visitors use this application annually to find recycling, reuse, and disposal options from hundreds of businesses and organizations. One of the oldest recycling databases in the country, "What do I do with...? "has evolved over more than 20 years from a printed paper directory to a modern, mobile-friendly application. The most searched-for materials are consistently: Appliances, batteries, C&D materials, electronics, and furniture. The division continues to refine and improve "What do I do with...?" which provides information on over 100 materials.

Designated Recycling Lists

King County's list of designated recyclables is informed by Ecology's annual statewide survey of materials that have been recycled in Washington state. The designated recyclables lists for unincorporated King County and the cities within SWD's service area are available on this website [Insert weblink here]. This link will be updated to reflect the latest designated recycling lists determined under the Recycling Reform Act and approved by Ecology.

While many products and materials are technically recyclable, only items that can actually get recycled into new materials and products should be collected as being "recyclable." Besides being technically recyclable, it must also be convenient to collect and process, be brought to responsible sorting and processing infrastructure, and be used to replace virgin materials in new products.

The list of recyclable materials is extensive, but available markets and infrastructure can vary from region to region. The division prioritizes materials for recycling in King County based on four key factors:

- The amount present in the waste stream
- The ability to handle the material—both collection and processing
- Viable and sustainable markets for the material
- Environmental and social justice considerations

These factors are also used to determine the appropriate methods for capturing the materials, i.e., through curbside collection or at County transfer facilities.

Starting in 2030, the state will implement a new EPR program for packaging and paper products. King County's list will move to align with the statewide program plan when it becomes available.

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Markets for Recyclables and Recovered Resources

Well-developed, stable markets for recyclable materials and recovered resources are essential for a functioning circular economy. End markets are intended to ensure the end use of a product or material does not also become its end of life, helping ensure the value of recovering resources is sustainable and supporting the County's zero waste of resources goal.

A key lesson from recent regional experience is that market development and resource-recovery capacity must be created in tandem. Developing markets without the operational ability to recover materials can result in "pre-abandoned" or fragile markets that cannot be supplied reliably. Conversely, building recovery systems for materials with no viable end markets leads to stranded investments and unnecessary handling costs. King County's solid waste system must therefore advance both market development and resource-recovery capabilities simultaneously to ensure long-term viability.

End markets should be responsible in the sense that:

1. All companies involved should be compliant—they adhere to applicable local, state, and national environmental, labor, and public health laws.
2. All technologies and processes should be environmentally and socially sound—not causing any unnecessary harm to people, overburdened communities, or the environment.
3. The value chain is transparent—the flow of materials can be traced and audited.

Ideally, end markets are local, so that transportation can be minimized, and materials management can be responsibly ensured. However, sometimes the only viable end markets are abroad. For example, Washington state has several paper mills, but they have been facing a trend of closures over the past decade. King County aims to develop end markets regionally, but recognizes that export markets play a significant role, particularly for plastics and mixed paper. Building a resilient circular-economy system will require coordinated investment in both market demand and recovery infrastructure, ensuring that materials collected for recycling or reuse have viable, responsible destinations and that the County's resource-recovery operations can reliably supply those markets.

In 2018, China implemented a policy called "National Sword" that banned or severely limited the import of recyclables, essentially eliminating the primary end market for mixed paper and plastics. In response, King County formed the Responsible Recycling Task Force[23] (RRTF) to develop a coordinated approach to improving recycling in the region. The RRTF consisted of representatives from SWD, the City of Seattle, cities in King County, solid waste management companies, and other interested parties. China's National Sword demonstrated the importance of well-functioning end markets.

In 2024, Ardagh, the main wine bottle manufacturer in Seattle, shut down. The closure was a challenge for glass recycling in the region, as it was a struggle to find alternative markets. Collected glass had to be stockpiled and shipped out of state for recycling or, in some cases, used as roadbed in landfills. King

[23] https://kingcounty.gov/en/dept/dnrp/waste-services/garbage-recycling-compost/solid-waste-planning-monitoring/solid-waste-advisory-committees/task-force

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County worked with local and state government partners, waste management service providers, and the glass industry to ensure that glass could continue to be recycled throughout the county.

King County will continue to ensure markets for recyclables are responsible, support the demand for post-consumer recycled content, and develop regional markets for priority materials.

Contamination Reduction and Outreach Plan

The goal of King County's Contamination Reduction Outreach Plan (CROP) is to reduce contamination of the materials collected in single-family, multifamily, drop-box, and commercial recycling programs within its solid waste service area through ongoing engagement with local cities, haulers, and other interested environmental parties.

CROP builds on the County's response to post-2018 recycling market shifts by strengthening regional coordination, public education, and cross-jurisdictional alignment to reduce contamination in single-family, multifamily, drop-box, and nonresidential recycling streams. Developed in collaboration with cities, haulers, processors, community organizations, and other interested parties, the CROP fulfills state requirements under RCW 70A.205.045(10) and provides a framework for future implementation aligned with the 2030 Comprehensive Solid Waste Management Plan. CROP supports the broader goals of the Comp Plan and the Re+ Initiative by advancing consistent recycling practices, developing local markets for recyclable materials, and reducing public confusion through unified messaging. These efforts complement the County's long-term strategies for waste prevention, circular-economy development, and climate action as outlined in the Strategic Climate Action Plan (SCAP), ensuring that regional recycling systems remain effective, economically viable, and environmentally responsible.

Contamination Challenges

Contamination in the recycling stream remains one of the greatest challenges to processing inbound material to materials recovery facilities (MRFs) from King County curbside programs. Even with growing media attention and additional efforts by government agencies, contamination continues to trend upward across material categories and increase over time as materials that cannot be recycled continue make it to the processing facilities.

The *2022 King County Material Recovery Facility Assessment*[24] (2022 MRF Study) reports on the class and condition of recyclables collected from homes and businesses in King County that are handled at MRFs in the Puget Sound region (Republic Services did not participate in the sampling of inbound and outbound materials for this assessment).

According to the hauler-reported data, the total inbound recyclable material from 2019 was estimated at 234,034 tons. Out of that, an estimated 28,831 tons of material (12%) had to be rejected during the material recovery process because it was either wet or soiled, or it wasn't recyclable in the first place. In 2020, these residuals were sent to Cedar Hills instead of Seattle. Over 32,000 tons was sent to the

[24] https://your.kingcounty.gov/dnrp/library/solid-waste/Solid-waste-planning-monitoring/Solid-waste-monitoring/MRF-assessment-2022.pdf

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landfill at a cost of over $3.8 million. More than half (52 perfect) of the rejected material included food and yard waste, cords and garden hoses, household hazardous waste, electronics and small appliances, diapers, textiles, shoes, furniture and construction debris that doesn't belong in recycling bins. It also included small materials, such as shredded paper, caps, and straws, which cannot be properly processed and, of course, recyclable items that were spoiled by food, liquid, or mold. Other materials of concern included loose plastic bags, plastic wrap, and sharps that pose serious safety hazards to MRF line workers.

The 2022 MRF Study documented the prevalence of contaminants in incoming loads from single-family and commercial customers. Figures 4-3 and 4-4 and Tables 4-2 and 4-3 show that the most common contaminants were nonrecyclable paper, nonrecyclable plastics, and nonrecyclable glass, as well as food waste, clothing, and textiles. Nonindustrial packaging film plastic, clothing, and textiles were the most prevalent contaminants that could have been recovered through specialty recycling or reuse programs. Food waste and compostable paper could have been recovered through organics collection.

Figure 4-3. Single-Family Inbound Recycling Composition

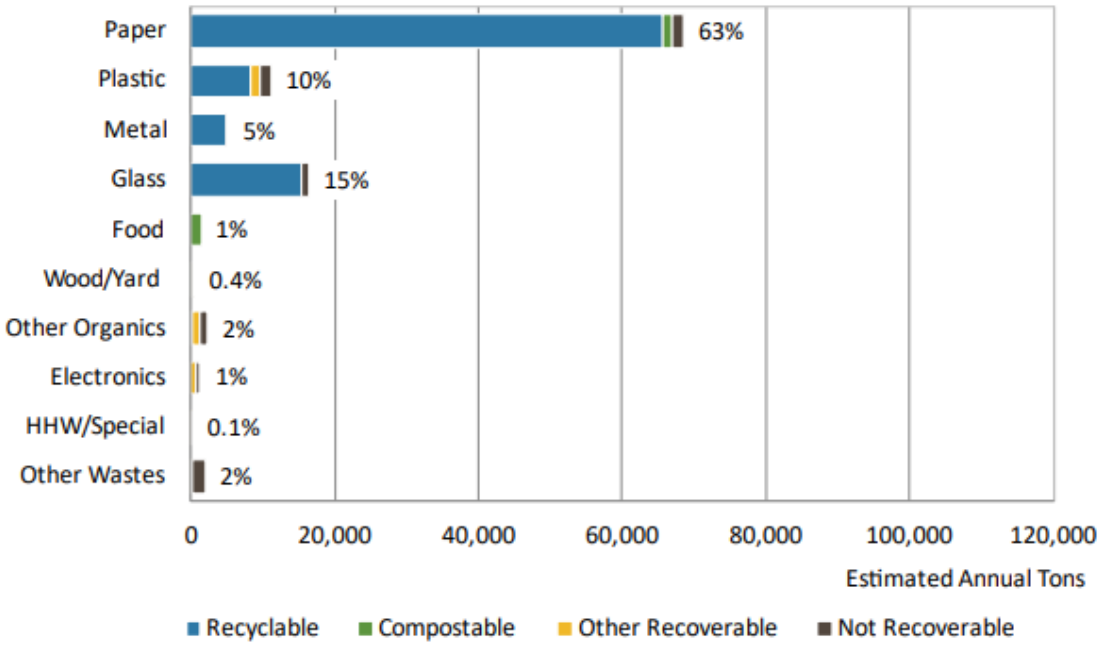

Table 4-2. Most Prevalent Contamination Materials in Single-Family Households

Material	Est. %	+ / -	Est. Tons
Other Paper	1.5%	1.0%	1,643
Miscellaneous Inorganics	1.4%	1.1%	1,504
Non-industrial Packaging Film Plastic	0.9%	0.2%	986
Other Glass	0.8%	0.9%	904
Rubber Products	0.8%	1.2%	860
Fabric & Clothing	0.6%	0.6%	686
Other Food Waste, Edible	0.6%	0.3%	612
Single Resin Plastic Products	0.6%	0.2%	608
Other Compostable Paper	0.5%	0.3%	545
Shredded Paper	0.5%	0.5%	503
Total for Top Materials	**8.1%**		**8,850**
All Other Contaminant Materials	**5.1%**		**5,502**
Total Annual Contaminant Tons	**13.2%**		**14,352**

Figure 4-4. Non-Residential and Multi-Family Inbound Recycling Composition

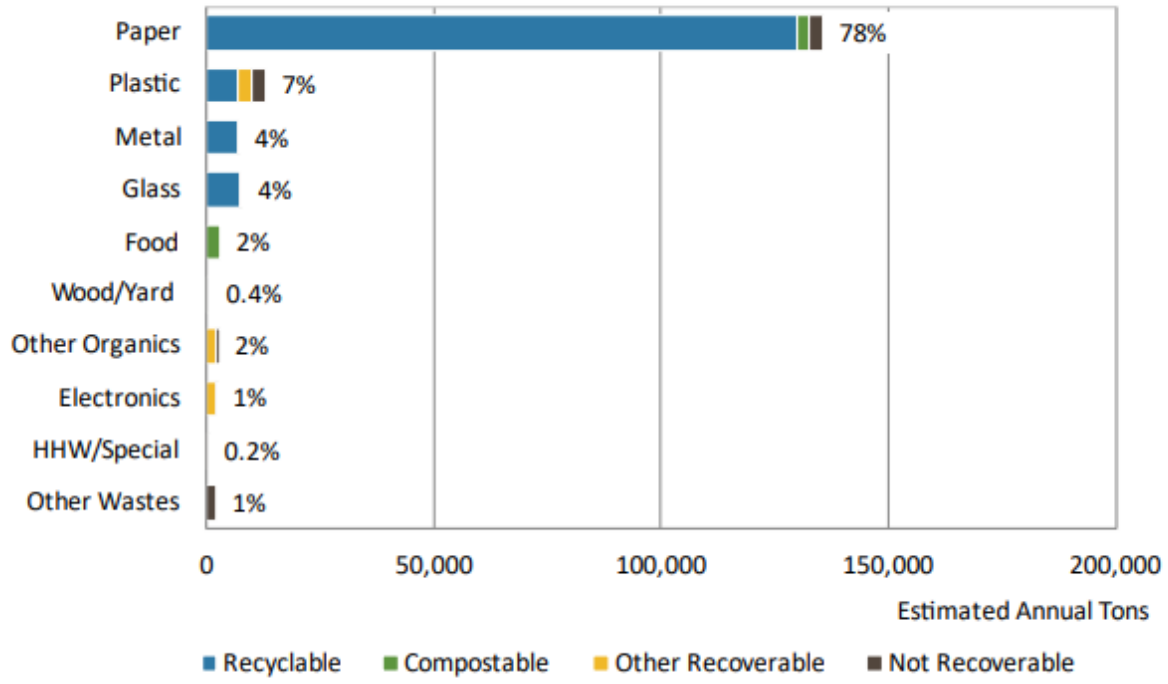

Table 4-3. Most Prevalent Contaminant Materials from Nonresidential and Multi-Family Households

Material	Est. %	+ / -	Est. Tons
Other Paper	1.4%	0.9%	2,403
Other Food Waste, Edible	1.0%	0.6%	1,674
Non-industrial Packaging Film Plastic	0.8%	0.3%	1,356
Other Compostable Paper	0.8%	0.4%	1,342
Single Resin Plastic Products	0.8%	0.4%	1,318
Miscellaneous Inorganics	0.6%	0.6%	1,110
Shoes & Other Mixed Textiles	0.6%	0.8%	1,016
Nondistinct Fines	0.6%	0.5%	965
Fabric & Clothing	0.5%	0.4%	957
Waxed Corrugated Cardboard	0.4%	0.4%	735
Total for Top Materials	**7.4%**		**12,877**
All Other Contaminant Materials	**6.1%**		**10,679**
Total Annual Contaminant Tons	**13.5%**		**23,557**

Processors agree that ongoing education and consistent messaging for residents and businesses in King County is key to reducing recycling contamination, and that ongoing partnerships between King County cities and the MRFs can help increase the impact of the messaging.

Contamination Reduction and Outreach Plan Implementation

The Responsible Recycling Task Force

China's "National Sword" policy that was enacted in January 2018 banned the importation of mixed paper (including newspaper), cardboard, metal, and all scrap plastic and imposed a stringent 0.5% contaminant limit for other recyclables, which essentially eliminated a major market for these materials.

The result was a global oversupply of these materials, dramatic commodity price drops, and few domestic markets to turn to. In response, King County's Solid Waste Advisory Committee (SWAC) and Metropolitan Solid Waste Management Advisory Committee (MSWMAC) formed the Responsible Recycling Task Force in April 2018 to respond to the short-term and long-term problems created by National Sword, which included addressing contamination, market vulnerability, and countering the public perception of "free" recycling. The task force, comprised of representatives from cities in King County, including Seattle, solid waste management companies, and other interested parties, worked together to develop a coordinated approach to improving recycling in the region.

After 10 months of work, the task force issued the following recommendations that are elaborated in detail in the *2019 Responsible Recycling Task Force Recommendations Report*[25]*:*

- **Establish Responsible Recycling Policies**: System-level changes are needed to solve this problem. The region should support, create, and advocate for policies that establish a statewide

[25] https://www.ezview.wa.gov/Portals/_1962/Documents/rcrr/KC%20task-force-final-recommendations.pdf

system of responsible recycling. A comprehensive statewide stewardship policy approach was prioritized as the most important action for achieving long-term responsible recycling success.

  - *Update:* Passed by the Washington Legislature in 2025, the Recycling Reform Act (Chapter 70A.208 RCW) creates an extended producer responsibility (EPR) program for residential packaging and paper products. SWD continues to pursue EPR for other materials including textiles and mattresses.

- **Develop Local Recycling Infrastructure**: Domestic infrastructure is lacking and is a necessary part of the solution. Local recycling infrastructure is a win-win-win for the region by building recycling system resiliency, creating local jobs, and minimizing greenhouse gas (GHG) emissions.

  - *Update:* SWD supported a Plastic Film Recycling Pilot with the American Chemistry Council (ACC) and their Wrap Recycling Action Program (WRAP). The pilot and program are no longer active, but some grocery stores do still collect plastic film and bags. Market development support for paper, plastic, and compost has been offered through the Re+ Circular Economy Grants and Re+ City Grants, as well as the circular-economy innovation program, NextCycle Washington.

- **Harmonize Recycling Programs and Messaging**: Consumer confusion drives contamination. All regional curbside programs should use consistent messaging about what is accepted in the curbside recycling container. King County has an annual process to discuss the materials list, which is also referenced in the 2019 Comp Plan.

  - *Update:* The Recycling Right Communications Consortium, a group of communications professionals with representatives from King County, King County cities, Seattle Public Utilities, Ecology, and waste management service providers, has been formed. Together, the consortium harmonizes regional messages related to recycling and composting right.

- **Increase Demand for Recycled Materials:** Materials collected for recycling must have end markets. The region should create demand for recycled-content products through legislation, procurement ordinances, and working with local companies to buy recycled products.

  - *Update:* Legislation has been passed that requires various plastic products and packaging to be made from a certain amount of post-consumer recycled content.

- **Create Clean and Marketable Feedstocks:** Recycled materials generated in the region cannot contribute to environmental pollution or endanger human health and safety at home or elsewhere, including other countries. Policies should ensure that materials are clean and suitable for reprocessing before being exported.

  - *Update:* Plastic bags and film, and shredded paper, have been removed from the materials that are accepted in recycling programs in King County and the City of Seattle. Certain types of expanded polystyrene packaging and products have been banned statewide. The proposed EPR policies for Packaging and Paper Products have all included

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requirements that documentation of the chain of custody from sorting facilities to responsible end markets.

- **Improve Upstream Design:** Changes in package design are creating many of the challenges with contamination in the County's recycling system. Local government should partner locally and nationally to encourage design-for-recycling and use of recycled materials in products and packaging.
    - *Update:* SWD is an active member of the Sustainable Packaging Coalition and the U.S. Plastics Pact.

The recommendations also led to several studies and reports that can be found on the Responsible Recycling Task Force's website.[26] The division continues to review and implement the Responsible Recycling Task Force's Recommendations.

Organics

Organic material includes food waste, food scraps, yard waste, food-soiled paper, and certified compostable products. According to the 2022 Waste Characterization Study, organic material that could be composted makes up over one-fourth of the county's waste stream. Collection and processing of organic material is critical to meet the County's waste diversion targets and climate goals. Food waste contributes 58% of a typical municipal landfill's methane emissions. However, most of this gas cannot be captured by landfill gas collection systems because of its rapid decay rate. By diverting organic material to higher use, such as feeding people and animals, "upcycling",[27] composting, or anaerobic digestion, these potent methane emissions can be reduced or altogether avoided. Figure 4-5 illustrates how organics and food waste move through the county in2024, with 51% of organics ending up in the Cedar Hills Regional Landfill. There is a growing effort to capture this segment of waste, especially food that is still fit for human consumption. A study of service management businesses and restaurants in King County (Cascadia 2017) estimated that approximately three-quarters of the food waste these businesses generated was edible food that could have been used by the business, discounted for quick sale, or donated.

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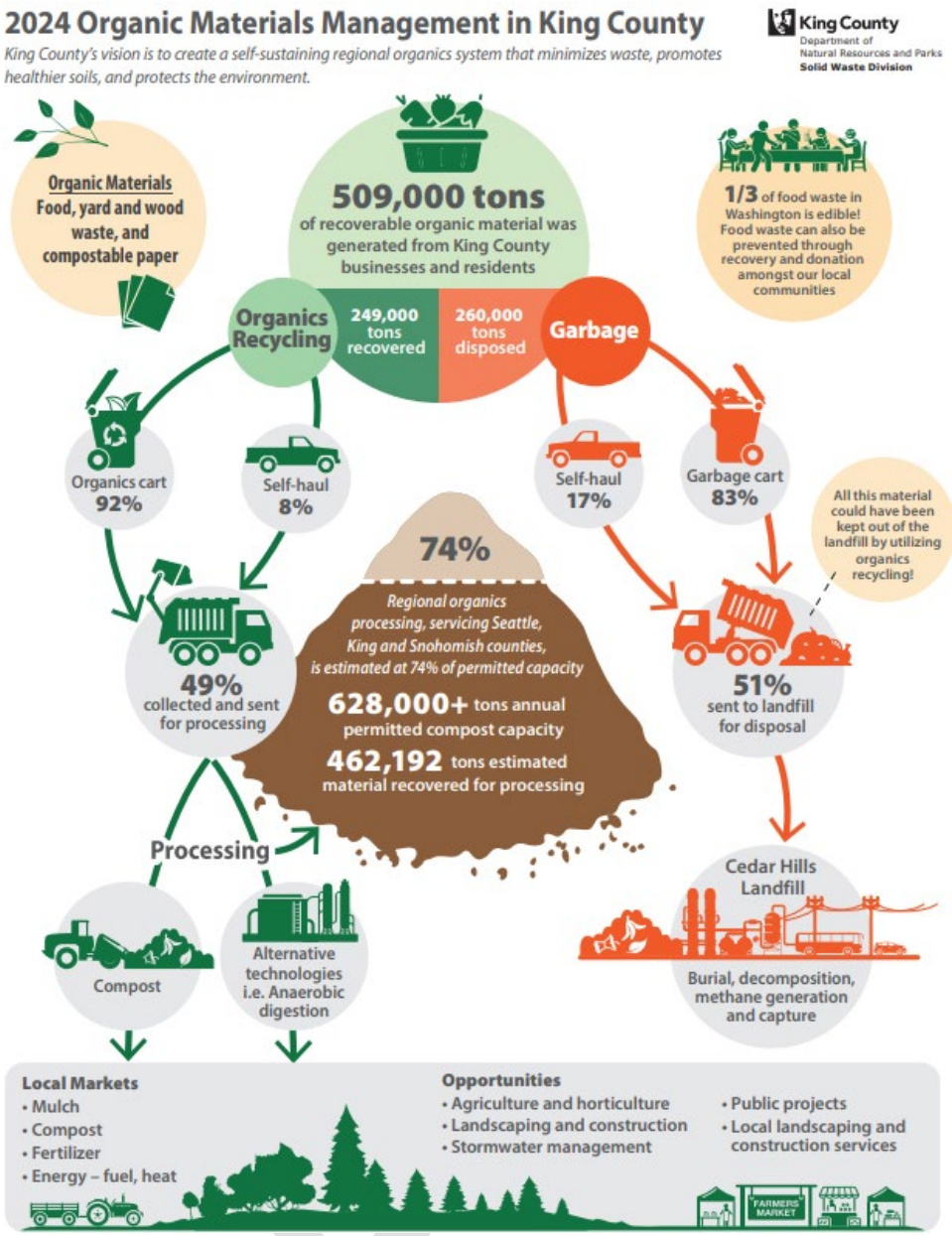
[26] https://kingcounty.gov/en/dept/dnrp/waste-services/garbage-recycling-compost/solid-waste-planning-monitoring/solid-waste-advisory-committees/task-force

[27] To take waste items and turn them into new products of higher value or better use.

Figure 4-5. 2024 Organics Material Management in King County



With the passage of the Organics Management Laws, all single-family and nonresidential properties must have source-separated organic solid waste collection services to discard unwanted organic materials by 2030 unless otherwise exempted. In addition, commercial businesses and schools generating at least 96 gallons of organic waste per week are required to divert organic materials as of 2026. Using guidance from Ecology, King County provides technical assistance to help businesses and schools access resources and comply with the law. As the requirements are being understood by businesses and the number of included businesses continues to grow, there is a growing demand for technical assistance to businesses and organizations that King County is well placed to continue to provide. The division will also continue to advocate for future policies to update and improve organics management in the state.

King County is developing a policy that will require diversion of organic material by 2030 for single-family households in areas currently exempted under the state law, including unincorporated areas and small cities. This initiative is a strategic effort to advance the County's zero waste goals by significantly reducing the amount of food waste sent to landfills. King County aims to streamline the adoption process for all cities within its boundaries, ensuring a cohesive and effective approach. This policy will not only help in managing waste more sustainably but also support environmental conservation efforts on a broader scale.

The division also plans to increase single-family organics diversion by implementing an educational cart-tagging program funded through the Revenue Sharing Agreement in unincorporated King County. By providing real-time curbside feedback and clear guidance on proper sorting, cart-tagging reduces contamination, improves participation, and drives greater diversion of food waste into composting.

Waste haulers throughout King County offer organics collection to both residential and commercial customers. Nearly all single-family households (99%) in King County already have access to curbside organics collection, which includes food waste and food-soiled paper products. Only Vashon Island and the Skykomish and Snoqualmie Pass areas, which house less than 1% of the county's residents, are not offered this service, but the division is considering options to expand offerings even in these remote areas. King County and many cities have implemented public education and outreach campaigns to promote and increase participation in food waste diversion through curbside organics collection.

Challenges to food waste collection include customer access (such as at multi-family residential units, where organics collection is not required or offered by property management), participation levels within existing service access, cost, infrastructure barriers, noncompliance, and contamination within the organics collected.

Enforcement matters because without it, food waste collection rules tend to become more of a suggestion than a standard. Clear, consistent enforcement ensures that households and businesses align with state law, which is essential for reducing landfill use, cutting GHG emissions, and keeping composting systems financially viable. A countywide approach is essential to support county residents, communities, and businesses and ensure clear understanding and compliance with state and County code requirements.

As collection of organics increases, it will be essential to ensure adequate regional processing capacity and reduce contamination of material. The division is actively working with regional partners to:

- Engage in long-range planning to increase organics processing capacity
- Investigate potential future processing structures and technologies
- Encourage greater use of compost and compost-based products
- Encourage operational changes at processing facilities to mitigate impacts on the surrounding community

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Residential Service

King County boasts a well-established residential collection system that serves the region in a safe, efficient, and cost-effective manner. Over the years, there has been a shift to incentivize subscription to services for recyclables and organics by offering smaller, less-expensive collection cans for garbage. The reduced fee for the smaller cans creates an incentive to generate less waste and divert as much material as possible to the recyclables or organics carts. Recycling and organics carts are also available at a lower rate than the equivalent size of a garbage cart.

Throughout King County, individual city contracts for collection of garbage, recyclables, and organics differ in several ways, such as the range of materials being collected, collection frequency, container types or sizes, fee structures, and more. The varying collection standards among cities have led to inconsistencies in regional education and messaging, confusion among customers, and difficulties in measuring and attaining regional goals.

To illustrate the variation in collection standards that currently exist, Table 4-4 provides a summary of single-family collection services by city and unincorporated area, showing the types of contracts held, the collection company serving the jurisdiction, container sizes offered, collection frequency, and fee structures. The recycling rates for each jurisdiction and unincorporated area, with and without organic materials, are also presented for comparison. The Utilities and Transportation Commission (UTC) cost assessment in Appendix A provides additional information about the UTC-regulated and contracted companies.

Table 4-4. Single-Family Collection Services by City and Unincorporated Area

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Jurisdiction	Contract/City/WUTC	Collection Company	Garbage Collection Frequency	Recycling Collection Frequency	Organics Collection Frequency	Single Family Recycling included in Garbage Fee	Single Family Organics included in Garbage Fee	Single Family Recycling Diversion Rate	Single Family Organics Diversion Rate
Algona	Contract	WM	Weekly & Monthly	Every Other Week	Every Other Week	Y	N	18%	21%
Auburn	Contract	WM	Weekly & Monthly	Every Other Week	Weekly	Y	N	18%	27%
Beaux Arts	UTC Franchise Holder	Republic Services	Weekly	Every Other Week	Every Other Week	N	N	23%	36%
Bellevue	Contract	Republic Services	Weekly	Weekly	Weekly	Y	Y	20%	46%
Black Diamond	UTC Franchise Holder	Republic Services	Weekly	Every Other Week	Every Other Week	N	N	19%	25%
Bothell	Contract	Recology	Weekly & Monthly	Weekly	Weekly	Y	Y	20%	39%
Burien	Contract	Recology	Weekly & Monthly	Every Other Week	Weekly	Y	Y	19%	41%
Carnation	Contract	Recology	Weekly & Monthly	Every Other Week	Weekly	Y	N	16%	41%
Clyde Hill	Contract	Republic Services	Weekly	Every Other Week	Varies	Y	N	18%	54%
Covington	Contract	Republic Services	Weekly & Monthly	Every Other Week	Every Other Week	Y	N	18%	26%
Des Moines	Contract	Recology	Weekly & Monthly	Every Other Week	Every Other Week	Y	N	19%	28%
Duvall	Contract	WM	Weekly & Monthly	Weekly	Varies	Y	N	23%	28%

Enumclaw	City	City	Weekly	Every Other Week	Every Other Week	Y	N	23%	0%
Federal Way	Contract	WM	Weekly & Monthly	Every Other Week	Weekly	Y	N	18%	31%
Hunts Point	UTC Franchise Holder	Republic Services	Weekly	Weekly	Weekly	N	N	19%	43%
Issaquah	Contract	Recology	Weekly & Monthly	Weekly	Weekly	Y	Y	22%	34%
Kenmore	UTC Franchise Holder	Republic Services	Weekly	Every Other Week	Every Other Week	N	N	22%	29%
Kent	Contract	Republic Services	Weekly	Every Other Week	Every Other Week	Y	Y	19%	31%
Kirkland	Contract	WM	Weekly & Monthly	Weekly	Weekly	Y	Y	22%	42%
Lake Forest Park	Contract	Republic Services	Weekly & Monthly	Every Other Week	Weekly	Y	Y	19%	50%
Maple Valley	Contract	Recology	Weekly & Monthly	Every Other Week	Every Other Week	Y	N	17%	28%
Medina	UTC Franchise Holder	Republic Services	Weekly	Every Other Week	Every Other Week	N	N	20%	38%
Mercer Island	Contract	Recology	Weekly & Monthly	Every Other Week	Weekly	Y	Y	19%	51%
Newcastle	Contract	WM	Weekly & Monthly	Every Other Week	Weekly	Y	Y	20%	39%
Normandy Park	Contract	WM	Weekly & Monthly	Every Other Week	Every Other Week	Y	N	20%	40%
North Bend	Contract	Recology	Weekly & Monthly	Weekly	Every Other Week	Y	Y	21%	36%
Pacific	Contract	WM	Weekly	Every Other Week	Every Other Week	Y	Y	17%	29%

Redmond	Contract	WM	Weekly & Monthly	Weekly	Weekly	Y	Y	21%	39%
Renton	Contract	Republic Services	Weekly & Every Other Week	Every Other Week	Weekly	Y	Y	21%	45%
Sammamish	Contract	Republic Services	Weekly & Monthly	Weekly	Weekly	Y	Y	21%	53%
SeaTac	Contract	Recology	Weekly & Monthly	Every Other Week	Every Other Week	Y	Y	18%	33%
Shoreline	Contract	Recology	Weekly & Monthly	Every Other Week	Weekly	Y	Y	19%	43%
Skykomish	City	City	Unknown	No Service	No Service	N/A	N/A	-	-
Snoqualmie	Contract	WM	Weekly & Monthly	Weekly	Weekly	Y	Y	25%	27%
Tukwila	Contract	Recology	Weekly & Monthly	Every Other Week	Every Other Week	Y	N	17%	21%
Vashon Island	UTC Franchise Holder	Waste Connections	Weekly & Every Other Week & Monthly	Every Other Week	Not Applicable	N	N/A	30%	0%
Woodinville	UTC Franchise Holder	WM	Weekly	Every Other Week	Varies by Season	N	N	20%	34%
Yarrow Point	UTC Franchise Holder	Republic Services	Weekly	Every Other Week	Every Other Week	N	N	21%	36%

Single-Family Residents

Single-Family Residential Minimum Collection Standards

The minimum levels of service outlined below in the Table 4-5 are standard for cities and unincorporated areas to provide the optimal service level for reducing waste and increasing the diversion of recyclables and organics from disposal.

Working with the community and the hauler, the division is exploring the inclusion of Vashon/Maury Island in the service level standards, as well as other ways to improve recycling services provided curbside and at the Vashon Recycling and Transfer Station. Skykomish and Snoqualmie Pass will not be included in the service-level standards at this time because of their remote locations and low population densities.

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The division also recommends improvements in this plan to curbside services for unincorporated King County residents. To achieve this, the division will develop actions around ongoing evaluation of service performance and rate structures, coordination with hauling and internal partners, and targeted policy and program adjustments to remove barriers to participation. Efforts will focus on improving affordability, service consistency, customer experience, and access to recycling and composting opportunities across the unincorporated areas.

Table 4-5. Single-Family Minimum Collection Standards

	Garbage	**Recyclables**	**Organics**
Container Type	Containers or wheeled carts	Wheeled carts	Wheeled carts
Container Size	Subscriptions available for various sizes	90+ gallon if collected every other week Smaller size if collected more frequently or if requested by customer	Subscriptions available for various sizes
Frequency of Collection	Minimum of once a week	Minimum of every other week	Minimum of every other week
Fee Structure	Fee increases with container size	Recyclables collection included in garbage fee Additional containers available at no extra charge	Organics collection may be included in garbage fee Additional carts may be included in base fee or available at an extra charge Customers requesting smaller carts may be offered a reduced rate

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Garbage Collection Frequency

Adjustments to the frequency of curbside collection for garbage, recyclables, and organics can also be used to influence recycling and disposal behaviors and reduce collection costs and truck traffic. Garbage collection across King County typically occurs on a weekly basis. This collection schedule has been partly driven by the presence of food scraps and other organics in the garbage that rapidly decompose and can pose environmental or public health concerns. With separate collection of organics for

recycling, there is an opportunity to modify weekly garbage collection to benefit ratepayers and to create a more environmentally sustainable system.

Following the positive results of a 2007 pilot study in Renton, the city rolled out every-other-week collection of garbage and commingled recyclables, with weekly collection of organics. Renton is the first city in King County to provide every-other-week garbage collection as the standard collection service for single-family households. Between 2009 and 2013, Renton's disposal per household dropped by 23%. While other factors, such as the economic downturn, likely played a role in disposal reductions, data from all of King County over the same period estimated a disposal drop of 8%, suggesting that every-other-week garbage is an effective tool to reduce disposal and increase recycling.

Embedded Curbside Organics Services

As of 2025, 18 cities within the division's service area have adopted rate structures that embed the cost of organics collection in the curbside garbage collection fee, providing a financial incentive for residents to reduce disposal. In 2016, the average weight of garbage disposed per household in these cities was 12% lower than the average for the rest of King County.

Multifamily Residents

Recycling and organics collection could be increased substantially at multifamily complexes and mixed-use buildings by adopting minimum collection standards for multifamily collection. The multifamily standards vary somewhat from the single-family standards to account for differences in service structure. To improve recycling and organics collection at mixed-use buildings, the cities and the County must consider both the multifamily collection standards and the recommendations for nonresidential collection. Table 4-6 provides an example of possible standards that could be implemented within King County.

Table 4-6. Example Multifamily Residential Minimum Collection Standards

	Garbage	**Recyclables**	**Organics**
Required Informational Labeling	Clearly marked containers indicating materials that are garbage. Information must include pictures.	Clearly marked containers indicating materials acceptable for recycling. Information must include pictures.	Clearly marked containers indicating materials acceptable for organics containers. Information must include pictures.
Container Type	Wheeled carts or dumpsters	Wheeled carts or dumpsters	Wheeled carts or dumpsters
Container Size	Subscriptions available for various sizes	Service equal to garbage service	Subscriptions available for various sizes
Frequency of Collection	Weekly or more often if needed	Weekly or more often if needed	Weekly or every other week

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Fee Structure	Fee based on container size and/or collection frequency	Recyclables collection included in garbage fee Additional containers available at no extra charge	Subscription service available for an added fee

Increased education and promotion are needed to improve recycling and organics collection at multifamily complexes. It will require concerted efforts by many to standardize the collection infrastructure and provide ongoing education and promotion for property managers and residents alike.

To further increase recycling and organics collection in multifamily and mixed-use buildings, the division—in cooperation with other jurisdictions, property managers, owners of multifamily properties, collection companies, and other interested parties—has conducted several research and pilot studies, of which the most recent was the 2023 Contamination Reduction Project Study. The findings from these studies conclude that successful recycling depends on the following factors:

- *Collection logistics:* Effective programs place recycling and organics containers for convenience, access, and ease of use; provide sufficient space and capacity for collection both inside and outside of the buildings; provide tools for collection, storage, and transport of recyclables and organics from units to collection points; and clearly label collection containers. For example, SWD found that large, image-based dumpster signage allowed for more residents to understand what was acceptable, even for users with limited English-reading skills. The organics management laws require large, color-coded labels on both the container and lid by 2028.
- *Policies and regulations:* Clear policies ensure that recycling is available and addresses issues such as contamination. Examples are service-level ordinances, city contracts that embed recycling in garbage rates, and building code requirements.
- *Education and outreach:* Effective recycling and organics collection in multifamily buildings hinges on education and outreach. Strategies such as door-to-door outreach, property manager training, and onsite assistance have been successful. In addition, education and outreach that addresses non-English-speaking communities is crucial.

Improving multifamily recycling will likely require these actions:

- *Clarifying and strengthening building code requirements* – The division's GreenTools program has been working collaboratively with cities to develop standards that can be used for multifamily buildings. If adopted, these standards will help ensure that design provides enough space to allow for recycling in future construction. This work is also supported by requirements set by the Organics Management Law in 2025 for the State Building Code Council to amend the building code to ensure sufficient space is allocated for organics collection.

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- *Providing manager and maintenance staff education* – Involvement and support from the property manager and staff is important to the long-term success of multifamily recycling. The institutional knowledge property managers can provide and the role they play in delivering education to each tenant and at each container are important considerations. This function should be supported with training and materials.
- *Providing ongoing recycling education for residents* – Recycling education needs to be provided on a continuing basis because most multifamily complexes have high tenant turnover. Providing educational materials with the lease, and repeated at least annually, coupled with information through newsletters and posters, ensures that residents receive the message and that it is reinforced on a regular basis.
- I*nvolving collection companies to assist with service improvements and education* – The collection company should be involved to provide insight and information about complexes' recycling infrastructure systems and to help with education outreach and feedback to the tenants about the quality of the recycling and level of contamination. Companies should monitor the recycling performance of the complexes and tag or refuse pickup of loads that are contaminated.
- *Expanding organics collection* –The cities and the County will adopt new requirements for multifamily organics service between 2030 and 2040. Implementation may include updates to code language, contract updates, building code space requirements, and a robust outreach program to educate customers on proper sorting. The division will partner with cities, composters, waste collection service providers, and community members to sequence a phased-in approach, pilot new technology—like countertop food dehydrators—and create inclusive and equitable outreach resources.

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Nonresidential Entities (businesses, schools, etc.)

The nonresidential sector comprises a range of businesses, institutions, and government entities, from manufacturing to technology centers and retail to food services. Unlike the residential waste stream, the types of materials discarded by this sector differ from business to business. For example, restaurants and grocers often generate large volumes of food waste, while manufacturers may generate large quantities of plastic wrap and other packaging materials.

One area with significant room for improvement is the diversion of food waste. The County expects a significant increase in curbside organics collection participation as businesses contract with curbside haulers to collect their organic waste to comply with state Organics Management Law requirements.

For both organic material and traditional curbside recyclables, nonresidential customers have the option to sign up for collection offered by their city's contracted waste hauler or with other collection companies. Some cities with collection contracts choose to embed recycling and/or organics service in the cost of garbage service, which leads to higher nonresidential recycling participation rates and ensures that recycling services are available to all businesses. Businesses in unincorporated King County and cities with UTC-regulated collection services can choose from several service providers in King County for their recycling needs. Promotion of these services by the County and cities helps increase awareness. For example, the County's "*What do I do with…?*" website[28] is one place businesses can look for a service provider.

Re+ School Programs

Classroom Workshops and Assemblies

The King County Green Schools Program[29] provides no-cost assemblies for elementary schools and classroom workshops for grades 1 through 12. During the 2024-2025 school year, the Re+ School Program reached 64 schools, 474 classrooms, and 19,266 students in 13 school districts. The program builds early understanding of waste reduction, recycling, and composting, helping students develop lifelong sustainability habits. By fostering this cultural foundation, schools are better prepared to adopt and maintain the behavioral and infrastructure improvements supported through the County's technical assistance efforts.

Technical Assistance

The Green Schools Program also provides assistance, recycling containers, signs, and recognition to K-12 schools, school districts, and student environmental clubs or "green teams." The program provided 319 schools in all 17 school districts in the division's service area with information, recommendations, and resources, such as recycling and composting bins and signs needed to start or expand recycling

[28] http://www.kingcounty.gov/whatdoIdowith
[29] https://kingcounty.gov/en/dept/dnrp/waste-services/garbage-recycling-compost/solid-waste-programs/school-programs

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practices. The Re+ Schools Program also expanded the number of green teams to 245 (up from 224 the previous year).

The Re+ School Voucher Program[30] helps fund conservation and waste diversion projects. In 2025, the Re+ Schools Program supported 136 schools in 15 districts with over $130,000 in vouchers. This technical assistance provides structured support that helps schools strengthen their waste-reduction and resource-conservation systems. With an average school recycling rate of 49%, the program offers a clear pathway for schools to improve their performance through targeted actions, recognition, and ongoing collaboration.

Food Waste Reduction and Food Share

The Green Schools Program assists schools and school districts to reduce wasted food through a number of strategies:

- Encourage students to take what they will eat and eat what they take.
- Set up cafeteria share tables on which students may place or take unopened, packaged foods and drinks from the school lunch program.
- Donate unopened, packaged items and uneaten whole fruits that cannot be re-served to students.

The purpose of the School Food Share program is to minimize wasted foods and beverages and safely distribute unwanted items from school lunch programs to local food banks and meal programs.

Beyond the Bin – Non-curbside Collection

Curbside collection is not necessarily the most efficient or cost-effective way to capture every type of recyclable or reusable product. Some products cause problems for MRFs because of their size or composition, while others are better candidates for take-back programs by manufacturers and retailers to extract harmful components and recycle others. Examples of these types of materials and their challenges are discussed below. The list of recyclables not accepted through curbside collection can be found at [insert web link].

Plastic Bags and Plastic Wrap

If plastic bags and wrap are collected in the recyclables cart, they create problems at the MRFs. As the bags move through the facility, they often get caught and jam the sorting machinery. They can also blow around and cause litter problems. For these reasons, curbside collection is not currently the best option. More appropriate options include promoting use of reusable shopping bags and take-back programs at the retail level.

Electronic Products, Fluorescent Bulbs and Tubes, Paint, and Batteries

[30] https://kingcounty.gov/en/dept/dnrp/waste-services/garbage-recycling-compost/solid-waste-programs/green-schools/overview

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Collecting these materials at the curb is complicated by the fact that some of them contain hazardous materials that must be safely disposed of. In Washington, state legislation requires manufacturers of these products to provide separate locations for free recycling. Handling these products through product stewardship ensures that they are recycled or disposed of responsibly. Product stewardship programs reduce costs to local governments and their ratepayers by eliminating the costs to recycle these products. Some cities offer special collection services for batteries, small appliances, and home electronics not covered by Washington's current product stewardship laws. For appropriately sized products that do not contain hazardous materials, curbside collection is a viable and efficient option.

Polystyrene Foam

One type of plastic that is not recommended for residential curbside collection is expanded polystyrene foam, commonly known as Styrofoam, which includes clamshell containers for take-out foods and blocks of plastic that are used to package electronics and other goods. Although Washington passed a law banning polystyrene packing peanuts, food service products, and portable coolers, the material is still prevalent in the waste stream. These materials are light and bulky, can break easily into small pieces or mix with other materials causing contamination, and are difficult to separate out at the MRFs. In addition, the quantity collected is so small that it takes a long time to collect enough material to ship to market. Although there are challenges to collecting expanded polystyrene foam packaging curbside, some cities, such as the City of Des Moines, offer special curbside pickup of the material. Block expanded polystyrene foam (not packing peanuts) is accepted, and residents are asked to put the blocks in a clearly labeled plastic bag and place it next to their curbside recycling cart. This allows the expanded polystyrene foam blocks to be handled separately from the commingled recyclables. Other cities, such as Kirkland and Redmond, have collection events to collect expanded polystyrene packaging.

Other Materials

Residents want to recycle as much as they can. The limited recyclability of some items has spurred some organizations to offer recycling services that go beyond what is offered by local governments. Ridwell[31] is a company that offers a premium service where they collect certain hard-to-recycle items, such as batteries, plastic film, and textiles, at customers' doorsteps and ensure that they are recycled or disposed of responsibly. TerraCycle[32] is another company that organizes hard-to-recycle services for businesses and residents. Sometimes these companies partner with cities to offer additional services, e.g., Redmond partnered with Ridwell to offer residents free Styrofoam and plastic film recycling from their doorstep. Furniture Repair Bank[33] partnered with cities to reuse furniture from collection events as well as at Seattle Public Utilities transfer stations. Second Use Building Materials[34] is piloting reusables collection outside the Shoreline transfer station. Some tool libraries offer household item repair and clothing mending workshops.

[31] www.ridwell.com
[32] www.terracycle.com/en-US/
[33] www.repairbank.org/
[34] www.seconduse.com/

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Bulky Items

One ongoing issue is finding the most efficient and cost-effective way to handle bulky waste—larger, individual items that do not fit in a garbage can or recycling cart. This includes recyclable items such as appliances and mattresses, potentially reusable items such as furniture, and other large items for disposal. Bulky waste collection services are available from collection companies throughout the county; however, costs vary, and these services are not widely used. The alternatives to bulky curbside collection are self-hauling the materials to transfer stations for disposal or recycling, donating or repairing items for reuse, or taking them to collection events sponsored by the County or the cities. None of these options is efficient or convenient for residents. New solutions should be investigated and piloted, such as repair events, salvage and reuse stores, and producer responsibility organization-funded takeback for more products.

Materials Collected at Recycling and Transfer Stations

Increasing diversion at recycling and transfer stations is a key piece of the puzzle for meeting the zero waste of resources goal. To achieve this, the division is increasing transfer station staff to monitor and direct the public to recycle materials. In addition, whenever possible, stations are equipped with collection spaces for mattresses, batteries, and sharps to improve diversion, decrease fires, and protect public safety. The division will continue to work through a variety of outreach pathways to teach visitors how to recycle right at the transfer station. There is an established process for identifying violators of recycling policies, educating them, and enforcing recycling at transfer stations. The division will continue to work toward increasing these efforts to divert recyclable material.

The division has also identified the following priority materials to collect at all transfer stations as the facilities are renovated or replaced with more capacity:

- Yard and wood waste
- Cardboard
- Mattresses
- Clean wood (not treated or painted)
- Scrap metal

Construction and Demolition

Construction and demolition (C&D) materials are from the construction, remodeling, repair, or removal of buildings, other structures, and roads. C&D materials include clean wood, painted and treated wood, dimensional lumber, gypsum wallboard, roofing, siding, structural metal, wire, insulation, and packaging materials, along with concrete, asphalt, and other aggregates. The County banned the disposal of C&D materials at the County-owned transfer stations and the Cedar Hills landfill in 1993. In the subsequent years until 2016, the division contracted with two private-sector companies to manage the majority of the region's C&D materials. The materials are typically hauled from a job site by: 1) the contractor or individual working at the job site, 2) an independent C&D debris hauler permitted to handle the

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materials for recycling only, or 3) a collection company permitted to haul materials for both recycling and disposal.

Processing of recyclable C&D material occurs using either source-separated or commingled methods:

- **Source-separated processing** involves sorting specific types of C&D material on the job site (e.g., metals, concrete, and clean wood) and transporting them individually to single-commodity recycling facilities.
- **Commingled processing** involves placing all recyclable C&D debris in one container and then transporting the loads to a facility that uses mechanical and manual methods to sort the recyclable materials.

Nonrecyclable C&D waste should be collected separately at the job site and hauled directly to a C&D debris transfer station, where the waste is transferred to rail cars for transport to a landfill. The division will partner with state and local agencies (including UTC and Ecology) to increase accountability for the two-bin rule, which would result in less nonrecyclable C&D waste going to the MRFs and thus higher facility diversion rates.

Around 2016, processing facilities improved their ability to separate materials, but since that time the industry has moved away from sophisticated processing systems toward minimal processing. This, combined with a trend toward mixing all job site nonrecyclable waste in with the C&D recycling loads, has resulted in the recyclables being more difficult to extract and dramatically lowering the diversion rates at the processing facilities.

The division does not accept C&D waste in mechanical dump-bed vehicles or trailers at its transfer stations or at Cedar Hills, but C&D does enter transfer stations in nonmechanized bed vehicles. King County Ordinance 18166 requires that the waste must be taken to a designated C&D debris recycling and/or transfer facility. The division has agreements with the designated facilities that require these facilities to recycle readily recyclable materials. These facilities are banned from landfilling certain materials, including clean wood, cardboard, metal, new gypsum scrap, asphalt paving, bricks, and concrete. Currently, all other C&D waste may be disposed of at Cedar Hills, but the division will consider banning other C&D materials as markets develop.

There is an exemption in the code that allows the division to accept C&D materials at transfer stations within certain parameters. In 2026, the division plans to accept commingled C&D recyclables (with documented markets) at the Enumclaw Transfer Station. The materials will be sent to a C&D MRF for processing, providing a much-needed C&D recycling option for contractors in southeast King County.

Independent C&D debris haulers with commercial permits may transport recyclable C&D materials from job sites to either source-separated or commingled C&D debris processors. These independent haulers may not, however, transport C&D materials for disposal. Only collection companies permitted by the UTC to haul solid waste can transport these materials for disposal.

The designated facilities listed in Tables 4-7 and 4-8 have agreements with the division and form a network of designated facilities where C&D materials can be recycled and/or disposed. Figure 2-4, a map

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in Chapter 2, *The Existing Solid Waste System*, shows the locations of these facilities. These facilities agree to meet criteria that the division specifies for recycling C&D materials. The division has a dedicated C&D enforcement specialist on staff to ensure that materials are being recycled. Cities are encouraged to adopt 2021 Washington Building Code Appendices Y and P, which complement the King County C&D ordinance. The division's GreenTools program is available to provide technical assistance to cities considering this option.

Table 4-7. Locations of Approved Nonrecyclable Construction and Demolition Material Facilities

Construction and Demolition Material Facility (non-recyclable)	**Location**
Black River Recycling &Transfer Station (Republic Services)	50 Monster Road, Renton
Cascade Recycling Center (WM)	14020 NE 190th Street, Woodinville
Eastmont Transfer/Recycling Station (WM)	7201 W Marginal Way SW, Seattle
Recycling Northwest (WM)	355 H Street NW, Auburn

Table 4-8. Locations of Approved Mixed Recyclable Construction and Demolition Material Facilities

Construction and Demolition Material Facility (mixed recyclable)	**Location**
DTG Renton	701 SW 34th Street, Renton
DTG Redmond	8504 192nd Ave. NE, Redmond
DTG Maltby	8624 219th Street SE, Woodinville
DTG Recovery 1	1805 Stewart Street, Tacoma
DTG Seattle	74 S Hudson Street, Seattle
Lautenbach Recycling	13084 Ball Road, Mount Vernon
MCS Recycling	7201 E Marginal Way S, Seattle

King County, City, and Community Collaboration, Operations, and Policy

Sustainable Purchasing

King County's sustainable purchasing policies and program require County agencies to buy products and services that reduce environmental impacts, advance social equity, and consider full life-cycle costs and

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benefits. By prioritizing recycled content, durability, reusability, low-toxicity materials, and credible environmental certifications (ecolabels), the program helps the county prevent waste, strengthen recycling markets, and promote a circular economy while supporting efficient operations and advancing regional zero-waste goals.

In practice, this includes purchasing recycled-content items, such as paper, compost, and building materials; requiring ecolabels to guide purchasing decisions; providing training and technical guidance to County staff; and sharing procurement strategies and contracts with cities and regional partners to expand sustainable purchasing across the region.

Another strategy to increase sustainable purchasing, supported by the 2022 statewide Organics Management Law and compost procurement ordinance requirement, is to provide training and education about the benefits of compost applications in parks and landscape projects, topdressing grass in parks, and stormwater management applications. Training services, resources, and technical assistance are available not only to King County divisions, but also to its cities, as well as any organization and/or business operating within the county. To monitor King County's progress on total compost purchased internally, the division submits an annual Compost Procurement Report to Washington's Department of Ecology, as required by the 2022 statewide law.

City and Community Collaboration and Technical Assistance

Waste Reduction and Recycling (WRR) Grants

The division provides grant funds and technical assistance to cities to help further waste prevention and recycling programs and services within their communities. Every two years, King County allocates a portion of solid waste tipping fees to cities via the noncompetitive Waste Reduction and Recycling (WRR) grant program. WRR funds are allocated proportionally according to each city's population and employment data, and all cities in the service area are eligible to apply to the program.

Currently, much of this grant funding is used by the cities to hold recycling collection events in their communities. As enhanced recycling services are added at renovated transfer facilities, curbside collection for bulky items becomes more cost-effective and widely available, and product stewardship programs offer more options for recycling, cities and the County may be able to phase out these collection events. Funds may instead be used in other ways to support waste prevention and recycling in their communities, including:

- Encouraging and promoting waste reduction
- Continuing to implement and improve general recycling programs
- Improving opportunities for the collection of specific commodities, such as paper
- Improving opportunities for the collection and/or composting of organic materials
- Increasing the demand for recycled and reused products
- Fostering sustainable development through the promotion of sustainable building principles in construction projects
- Managing solid waste generated by public agencies in a manner that demonstrates leadership

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- Broadening resource conservation programs that integrate waste prevention and recycling programs and messages
- Providing product stewardship opportunities

Re+ City Grants

King County cities are a crucial component to the success of Re+. Supporting zero waste efforts by cities maximizes the potential for local actions that divert recyclables from landfills and reduce GHG emissions. Re+ Cities grants are designed to fund cities eager to jump-start innovative projects, with funding priorities for prevention, reuse, recycling, and equity and social justice initiatives. Cities that have signed the Re+ Pledge are eligible to apply, either individually or through a joint proposal with other cities or partners, to receive funding from the Re+ City grant program. The first grant cycle spanned the 2023-24 biennium, while the second cycle was launched in 2025 with funds distributed over the 2026-27 biennium. Grant proposal evaluation criteria were developed in consultation with King County cities and the Re+ Community Panel.

Local Solid Waste Financial Assistance Grants

Ecology also supports waste prevention and recycling programs in King County through the Local Solid Waste Financial Assistance program (formerly known as the Coordinated Prevention Grant program). Funds are allocated within the county based on population. The division uses funds allocated to the unincorporated areas to support waste prevention and recycling efforts such as recycling collection events, yard waste and food scrap recycling, and natural yard care education and promotion. The cities also receive funds directly from Ecology to support their own waste prevention and recycling programs, with applications coordinated through the division.

Re+ Circular Economy Grants

Re+ stimulates the waste-free economy through inclusive and equitable grants. The Re+ Circular Economy Grants support market development for circular economy projects and use and reuse activities that further King County's commitment to zero waste of resources. This competitive grant program is open to private, nonprofit, and public entities to support waste prevention and waste diversion. The first cycle spanned 2022-23, while the second was completed over 2024-25.

NextCycle Washington

Organizations seeking circular economy opportunities in Washington often encounter a lack of funding, business development, technical assistance, and other incentives to become more circular. In 2021, the division took the initiative to close these gaps and build a more comprehensive market development strategy in the region by creating a circular economy innovation program called NextCycle Washington[35], which acts as a platform for all market development and circular economy activities. The program builds on other NextCycle platforms in Michigan and Colorado that have proven successful.

[35] https://www.nextcyclewashington.com/

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NextCycle Washington was established in 2022 through a collaborative co-design process involving state and local governments, businesses, NGOs, and community organizations. Program governance is guided by a diverse group of external experts and individuals with lived experience from industry, local government, and community sectors. Today, King County, in partnership with the Washington State Department of Ecology and the Washington State Department of Commerce, co-leads and actively supports the programs delivered through NextCycle Washington. Three types of support have been provided for projects that expand waste prevention, repair, reuse, recycling, and composting:

1. *Circular Accelerator* – A six-month program designed to support and advance promising circular businesses and projects with workshops, business and technical assistance, pitch development, and matchmaking.

2. *Renew Seed Grants* – Seed grants up to $10,000 for early-stage projects for businesses (startups, small and large), community-based organizations, Tribal governments, and research institutions, as well as access to mentors, consultants, and networking to support project execution and growth planning.

3. *Community-Based Pilot Grants* – Small grants ranging from $5,000 to $7,000 that support early-stage ideas or projects addressing deep systemic needs. These grants serve and/or are led by communities that are underserved or overburdened, such as low-income or Black, Indigenous, and/or communities of color. They fund smaller initiatives that pilot or research innovative approaches to local circular economy solutions and community-driven endeavors.

Green Building

The division's GreenTools program enhances the built environment while addressing environmental concerns, such as climate action, habitat restoration, waste reduction, and community planning. This collaborative approach integrates equity, economic vitality, and environmental well-being. The division actively engages communities to ensure present needs are met, while benefiting future generations.

GreenTools programs offer technical assistance, hands-on training, and policy development. Through this program the division helps people find resources for building sustainably, green building certification, recycling construction materials, and more. The intent is to prioritize material management in order to maximize the diversion of C&D material from landfills, encourage market development of recycled and recovered materials by sourcing recycled-content products, and lowering embodied emissions by using salvaged materials that will promote a circular economy.

Technical Assistance for County and City Capital Projects

The division provides technical assistance to County-owned capital improvement projects to implement sustainable materials purchasing, e.g., Loop biosolids, food and yard waste, bio-based materials, materials with recycled content, salvaged wood, and third-party certified products that have high reuse, recycling, and upcycling value. The Green Building Team Program manages and maintains the King County Sustainable Infrastructure Scorecard, which provides guidelines for County-owned capital improvement projects and programs to build more sustainably. King County Green Building Ordinance (K.C.C.18.17) requires all County-owned capital improvement projects and programs to achieve Platinum-level rating

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via the Scorecard. It also requires a minimum of 85% C&D material diversion from landfills, with a goal of zero waste of valuable materials by 2030. Material selection is a major contributor to ensure projects and programs achieve the required performance level. The division also provides technical assistance to County-owned projects to build better with less materials and to build for disassembly for reuse and salvage.

Through the Regional Code Collaboration, GreenTools convenes jurisdictions from across the region to develop building codes that support the County's shared climate goals. Staff then work with jurisdictions to adopt these codes locally and often propose them to the State Building Code Council for statewide adoption. The Green Building Handbook[36] is a product developed by King County and provided to jurisdictions to educate staff and the public on how to make their home improvement projects more sustainable. GreenTools provides green building technical and programmatic support, as well as training to jurisdictions.

SWD established the County's first green building policy through an Executive Order in 2001 as an effort to divert recyclable materials from landfills. That policy has been codified in King County Code and managed by SWD's GreenTools Program for almost 25 years, advancing progressive material management, C&D material diversion, and salvage and reuse practices in the built industry. These efforts have resulted in cost savings from recycling instead of landfilling and expanding the life of landfills by diverting materials that could be reused or recycled. In addition, SWD's leadership in green building practices has illustrated successes in operating recycling and transfer stations, landfills, and other infrastructure in a sustainable way that integrates equity and social justice opportunities, which stand as examples for the solid waste and recycling industry.

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[36] https://kingcounty.gov/en/dept/dnrp/buildings-property/green-sustainable-building/green-building/green-building-handbook

Chapter 5 – Solid Waste Transfer and Processing System

Policies

T-1	Provide solid waste services to contract collection companies and self-haul customers at transfer stations, and to self-haul customers at drop boxes.
T-2	Provide solid waste transfer services in the urban and rural areas of the county that may be tailored to local and facility conditions and interlocal agreements with King County cities.
T-3	Engage and coordinate with cities and communities in the siting and development of facilities, and in developing mitigation measures for impacts related to the construction, operation, and maintenance of transfer facilities, as allowed by applicable local, state, and federal laws.
T-4	Build, maintain, and operate service-oriented SWD facilities with the highest efficiency, green building, and sustainable development practices.
T-5	Provide for collection of recyclable materials at all 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 or through a readily available producer or retailer-provided program.
T-6	Periodically evaluate the transfer station level of service criteria to ensure that the criteria remain relevant.
T-7	In the event of an emergency, reserve the transfer system for municipal solid waste and make the recycling of related debris a priority.
T-8	Pursue maximum materials diversion and resource recovery opportunities at transfer stations, including opportunities to effectively address increasing organics diversion in King County.

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Summary of Recommended Actions

The following table includes a menu of recommended actions that the County and the cities should implement. Under the responsibility column, the entity listed first has primary responsibility for the action.

Action Number and Responsibility	Action	Detailed Discussion
1-t County	Analyze options for retaining the Renton Transfer Station property for waste diversion, recycling, or other operational purposes.	Page #-#
2-t County	Support the development of a safe, equitable, and convenient sharps management system to serve generators of residentially generated sharps across the region.	Page #-#
3-t County, Cities	Identify potential temporary debris management sites where emergency debris can be stored until it is sorted for recycling or proper disposal.	Page #-#
4-t County	Continue to implement a resource recovery program at new recycling and transfer facilities to remove targeted materials from the waste stream.	Page #-#
5-t County	Define a more comprehensive model of enforcement of current rules and policies for transfer stations, which includes a system of accountability for both customers and employees at transfer facilities.	Page #-#
6-t County	Develop a long-term plan for the future of the transfer system, including analyzing the role of transfer stations and new facilities.	Page #-#

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7-t County, cities, Public Health, haulers, processors	Pursue improvements in collection and processing to effectively address increasing organics diversion in King County.	Page #-#

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Solid Waste Transfer and Processing

This chapter outlines the services and functions of the transfer system that can adapt to changing needs and emerging technologies. This chapter also includes plans for effectively managing local and regional emergencies.

The Transfer System and Services

The concept of a regional transfer and disposal network in King County grew out of a nationwide movement in the 1960s to impose stricter standards for protection of public health and the environment. The original purpose of the transfer network was to replace the open, unlined community dump sites in use at the time with environmentally safe transfer facilities, where garbage could be delivered by curbside collection trucks and self-haulers. From these transfer sites, garbage could then be consolidated into larger loads for transport to the Cedar Hills Regional Landfill (Cedar Hills).

Table 5-1 lists the locations of current and future transfer facilities, along with the tons of garbage, yard waste, and wood waste received; the number of customers served; and the recycling services provided at each facility.

Table 5-1. Current facilities and services

Facility and Address	**Year Opened**	**Garbage Tons Received 2024**	**Recycling Tons Received 2024**	**Customer Transactions 2024**[i]	**Recyclable Materials Accepted**	**Status**
North County						
Shoreline Recycling & Transfer Station 2300 North 165th Street, Shoreline 98133	2008	43,908	4,547	67,880	Standard curbside recyclables, CFC and Non-CFC appliances, mattresses, futons and boxsprings, tires, clean wood, scrap metal, yard waste, fluorescent bulbs and tubes, plastic	Operating

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					film and plastic grocery bags, expanded polystyrene foam blocks and coolers, household sharps.	
Northeast County						
Factoria Recycling & Transfer Station 13800 SE 32nd Street, Bellevue 98005	2017	142,430	5,248	119,098	Standard curbside recyclables, scrap metal, textiles, CFC and non-CFC appliances, clean wood, yard waste, tires, mattresses, futons and boxsprings, household sharps, and hazardous waste including recycling of batteries (household, vehicle or marine), fluorescent bulbs and tubes, thermometers and thermostats, propane tanks.	Operating

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Houghton Transfer Station 11724 NE 60th Street, Kirkland 98033	Mid-1960s	127,951	803	88,900	Standard curbside recyclables, scrap metal, textiles.	Close Houghton Transfer Station once Northeast Recycling and Transfer Station is operational
Northeast Recycling & Transfer Station [Update with Kirkland address]	N/A	N/A	N/A	N/A	To be determined	Anticipated construction starts 2030
Central County						
Bow Lake Recycling & Transfer Station 18800 Orillia Road S, Tukwila 98188	2013	280,940	11,007	211,949	Standard curbside recyclables, CFC and non-CFC appliances, mattresses, futons and boxsprings, tires, clean wood, scrap metal, yard waste, fluorescent bulbs and tubes, plastic film and plastic grocery bags, expanded polystyrene foam blocks and coolers, household sharps.	Operating

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Renton Transfer Station 3021 NE 4th Street, Renton 98056	Mid-1960s	57,495	550	66,374	Standard curbside recyclables, scrap metal, and textiles.	Close Renton Transfer Station when replacement capacity is available. No decisions have been made regarding closure pending completion of a study on capacity. Possible future uses of this facility are to be studied.
South County						
South County Recycling and Transfer Station[ii] 35101 W Valley Hwy. S, Algona 98001	2026	N/A	N/A	N/A	Standard curbside recyclables, CFC and non-CFC appliances, mattresses, futons and boxsprings, tires, clean wood, scrap metal, yard waste, fluorescent bulbs and tubes, plastic film and plastic grocery bags, expanded polystyrene foam blocks	Opened 2026

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					and coolers, household sharps.	
Rural County						
Cedar Falls Drop Box 16925 Cedar Falls Road SE, North Bend 98045	1990	377	682	18,614	Standard curbside recyclables, textiles, yard waste.	Operating
Enumclaw Recycling & Transfer Station 1650 Battersby Ave. E, Enumclaw 98022	1993	30,934	3,213	57,053	Standard curbside recyclables, CFC and non-CFC appliances, clean wood, scrap metal, textiles, yard waste, mattresses, futons and boxsprings, fluorescent tubes and bulbs.	Operating
Skykomish Drop Box 74324 NE Old Cascade Hwy., Skykomish 98288	1980	817	36	1,668	Standard curbside recyclables	Operating
Vashon Recycling & Transfer Station 18900 Westside Hwy.,	1999	7,866	2,060	20,408	Standard curbside recyclables, appliances, scrap metal, textiles, yard waste, fluorescent	Operating

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Vashon 98070					tubes and bulbs, mattresses, futons and boxsprings, household- and business-generated sharps, construction and demolition debris.[iv]	

[i] *Only paid transactions are recorded.*

[ii] *Replacing Algona Transfer Station*

[iii] *Standard curbside recyclables are glass and plastic containers, tin and aluminum cans, mixed paper, newspaper, and cardboard.*

[iv] *Construction and demolition debris is accepted for disposal.*

[v] *Recycling tonnage compiled from vendor invoices. Recycling is not directly weighed at stations.*

Waste Acceptance at Transfer Stations

To ensure that materials in the waste stream are handled in accordance with federal, state, and local regulations and to prevent negative operational impacts, the division adopts and implements waste acceptance policies through a public rule. The King County Waste Acceptance Rule PUT 7-1-6(PR), or its successor, states the policies for wastes that are and are not accepted for disposal in the division's solid waste system, including any conditions of disposal. Regulations that dictate certain Waste Acceptance Rule policies include, but are not limited to, the Resource Conservation and Recovery Act, Title 40, Subtitle D; WAC 173-351; King County Board of Health Code, Title 10; and King County Code, Title 10. The Waste Acceptance Rule carries the force of law and is implemented and enforced by division staff. Customers are educated about the County's waste acceptance policies through online resources, signage at stations, direct customer service, and public and media outreach.

To protect public health, safety, and welfare, division staff perform important functions to ensure the waste being received adheres to waste acceptance policies. Scale operators and transfer station operators oversee waste, receiving 99.9% of the waste ultimately bound for the landfill. Waste inspectors (formerly waste screeners) oversee permitted waste received directly at the landfill. Inspectors also conduct site visits to each transfer facility to perform random and intentional inspections of selected incoming loads of waste to gauge waste acceptance policy compliance. Facility staff initiate enforcement for waste acceptance policy violations. From the 900,000 tons of waste our transfer stations receive each year, about 3,500 loads of waste are inspected at division facilities. Approximately 220 violations per year were documented, based on an average over a six-year period. In cases where waste acceptance policies are repeatedly disregarded, division staff enforce compliance by reporting violations and using a progressive process of warnings and citations involving fines. When the

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division incurs substantive costs to clean up unacceptable wastes, a notice and order is issued to recover costs.

Resource Recovery at Transfer Stations

Resource recovery is the separation of recyclables that happens after disposed materials are received at King County recycling and transfer stations; it is a growing aspect of division business. Historically, the division's transfer station recycling programs have been limited to source separation done by public customers. However, because up to 67% of the materials brought to the transfer stations could be recovered for recycling, sorting out target materials can help reach recycling goals and extend the life of the landfill. The division is increasing its resource recovery efforts. Based on a successful pilot project that focused on exploring logistics to intercept and separate tons of recyclable cardboard, clean wood, yard waste, and scrap metal at select recycling and transfer stations, new staff positions were approved for customer engagement, rule enforcement, and expanded sorting of recyclables from mixed waste at the Shoreline, Bow Lake, Factoria, and Enumclaw stations. Recycling bins are also provided close to where self-haul customers unload their vehicles at those stations.

In addition to providing standard recycling services, Bow Lake, Enumclaw, and Shoreline recycling and transfer stations have increased the amounts of cardboard, scrap metal, and clean wood recycled by actively removing these materials from mixed waste with use of an excavator and by providing additional staff to engage customers in the separation of recyclables from mixed-waste loads at the point of disposal.

To continue these efforts, the division will further develop a system of enforcement and compliance at its transfer stations with new measures addressing multiple points in the transfer system, including staff and users of the division's facilities. This Comp Plan also proposes developing a plan that analyzes the future state and function of the transfer system to support both the next long-term disposal method (see Chapter 6, *Landfill Management and Solid Waste Disposal*) and resource recovery efforts, including the potential to adopt and implement new technology.

Services for Moderate-Risk Wastes

Many common household products, such as pesticides and certain cleaning products, contain ingredients that are toxic, flammable, reactive, or corrosive. When disposed of improperly, these products, referred to collectively as moderate-risk waste, can pose a threat to human health and the environment. Moderate-risk waste generated in King County is managed through the Hazardous Waste Management Program[37] (HWMP). This program is jointly managed by King County, the City of Seattle, the 37 cities within SWD's service area, and Public Health-Seattle & King County (Public Health). The guiding policies and plans are contained in the joint 2021 Hazardous Waste Management Plan[38], mandated under RCW 70.105.

The County accepts moderate-risk waste from residents through two drop-off sites; one at the Factoria Recycling and Transfer Station, and the other at the South County Recycling and Transfer Station. In addition, the City of Seattle operates two moderate-risk waste collection sites within its borders, which are open to all King County residents. Wastes collected through these services are recycled, reused, or

[37] https://kingcounty.gov/en/dept/dnrp/waste-services/hazardous-waste-program
[38] https://kingcounty.gov/en/dept/dnrp/waste-services/hazardous-waste-program/about-us

incinerated when necessary at certified hazardous waste processing facilities around the country. In 2024, 78% of the hazardous waste collected was recycled or beneficially reused as alternate fuel at the certified facilities. None is disposed of at Cedar Hills. Moderate-risk waste collection for residents is funded through a surcharge on garbage disposal, residential and business garbage collection, and wastewater discharge fees. Residents and businesses using the services are not charged at the drop-off locations. Jurisdictions receive funds from the HWMP to provide the service.

The County's Wastemobile was the first program of its kind in the nation and operated from 1989 to 2026. It was a mobile service that traveled to communities within King County, staging collection of moderate-risk waste, or more commonly referred to as household hazardous waste, at each site for two or three days at a time. The Wastemobile also provided a mobile hazardous waste collection at The Outlet Collection Seattle Mall in Auburn each Saturday and Sunday until 2026, when it was replaced by the permanent drop-off site at the South County Recycling and Transfer Station.

The County's Factoria recycling and transfer station offers hazardous waste drop-off service six days a week. In 2025, 19,571 customers brought 375 tons of hazardous waste to Factoria. Since 2008, Factoria and the Wastemobile have also accepted hazardous waste from small businesses. In 2025, this program served 324 small-quantity generator business customers and collected 21 tons of hazardous waste.

Collection of Sharps

Sharps waste includes all hypodermic needles, syringes with needles attached, IV tubing with needles attached, scalpel blades, and lancets that have been removed from the original sterile package, which require special handling to ensure their safe and environmentally compliant collection, transfer, and disposal. Without proper containment, sharps can pose a safety hazard to workers through potential exposure to blood-borne pathogens or other disease-causing agents. Within King County, the disposal of sharps is regulated by Title 10 of the Code of the King County Board of Health and by King County's Waste Acceptance Rule PUT 7-1-6(PR), or its successor.

Disposal of sharps in the general waste stream is prohibited. Properly containerized and labeled home-generated sharps are currently accepted from residents in separate, secure receptacles at the Factoria, Shoreline, Bow Lake, and Vashon recycling and transfer stations. However, issues related to worker safety and biomedical waste treatment threaten the sustainability of this service. These concerns, in combination with regional gaps in customer access to safe sharps disposal, were explored and addressed by the cross-sector Safe Sharps Advisory Group convened by SWD and Public Health in 2024. The group members represented local government agencies, waste hauling companies, solid waste workers, organizations serving disproportionately impacted communities, patient advocacy groups, community health service providers, organizations serving people who inject drugs (PWID), and organizations serving unhoused residents. This group developed a set of recommendations to expand access to safe, affordable, and convenient sharps disposal across the region, including pursuing a statewide Extended Producer Responsibility program. The ideal recommended components of the program would include monitored and unmonitored drop boxes, free mail-back services, and best practices for management of drop boxes. The implementation of such a program in the future may result in changes to the division's sharps acceptance policy.

Business-generated sharps are not accepted at the transfer facilities, except at Vashon with prior authorization from the Waste Stream Compliance & Enforcement Unit. Sharps generated by medical

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facilities or businesses are accepted for disposal at Cedar Hills with prior authorization from the Waste Stream Compliance & Enforcement Unit. Transportation of nonresidential biomedical waste is a regulated activity by Public Health-Seattle & King County.

Trends in Transfer Station Usage

Figure 5-1 shows the tons of garbage received at the transfer stations over the last 17 years. The economic downturn is primarily responsible for the tonnage reduction since 2007. Tonnage amounts rose slightly during the COVID-19 work-from-home order, starting in 2020, with a reduction in nonresidential tons and an increase in residential tons. The division does not expect a rapid return to earlier tonnage levels.

Figure 5-1. Total tons processed at transfer facilities (2007-2024)

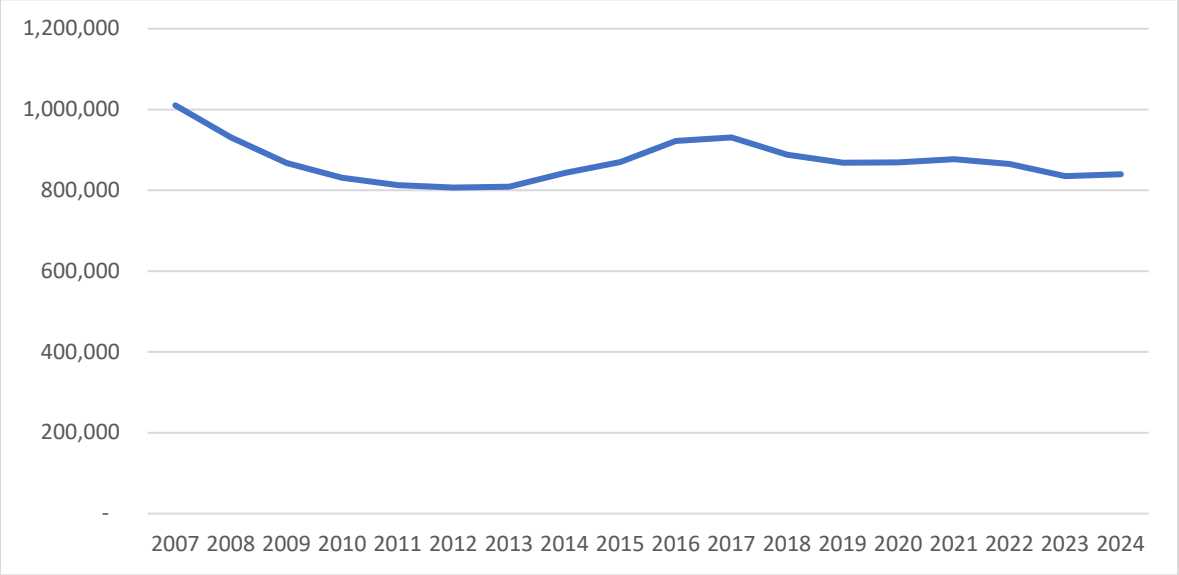

Table 5-2 summarizes hauler tons from the division's waste characterization studies from the years 2015, 2019, and 2022. It also shows the percentage of total tonnage from those years that were recyclable or recoverable material, i.e., materials that did not need to be disposed of in a landfill. The year 2022 shows a decrease in the total percentage of recyclable and recoverable material going through the transfer stations. While the exact reason for this improvement is unknown, possible contributing factors could include COVID-19 pandemic impacts and effective upstream outreach and education.

Table 5-2. Residential Waste Tons vs Nonresidential Waste Tons by Hauler Type

	2015	**2019**	**2022**
Residential			

Contract hauler tons	325,459	310,640	368,123
Self-hauler tons	210,320	172,622	148,084
Nonresidential			
Contract hauler tons	292,674	369,478	311,748
Self-hauler tons	14,500	15,792	15,595
Percent of total tonnage that was recyclable/recoverable	69.8%	71.6%	67.4%

In 2022, the top five recyclable/recoverable materials brought into the transfer stations for disposal were other edible food waste (8.3%), dimensional lumber (7.1%), low-grade mixed paper (5.1%), other compostable paper (4.9%), and other C&D waste (4.4%).

Types of Haulers

(Please note these definitions are provided to aid understanding of data presented in this Comp Plan. These terms and definitions may not apply to division materials outside of this document.)

Self-Haulers are county residents, businesses, and institutions who choose to bring their municipal solid waste and recyclable materials to the transfer facilities themselves. These haulers include junk haulers and landscape companies.

Contract Haulers are haulers that are contracted with a city for garbage, recycling, and/or organics hauling services or cities that provide their own hauling services. These include haulers like WM, Republic Services, Waste Connections, Recology, and the City of Enumclaw.

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Evaluation and Planning for Urban Transfer Stations

The division conducts periodic evaluations of the transfer stations located in the urban areas of King County. These evaluations measure a station's capacity to meet demand, both at the time of evaluation and 10-20 years into the future, taking into account the projected population growth of King County.

The Planning Process

Since 1992, continuing growth in the county and technological changes in the solid waste industry have intensified the need for significant improvements and updates to the division's infrastructure. Through Ordinance 14971, codified in KCC 10.25.110 in 2004, the County established a forum for cities, division, and County Council staff to collaborate on solid waste planning through the advisory committees—the

Solid Waste Advisory Committee (SWAC) and the Metropolitan Solid Waste Management Advisory Committee (MSWAC). These committees hold monthly meetings that are open to the public.

The work done under this ordinance included the *Solid Waste Transfer and Waste Management Plan* (Transfer Plan), which provided recommendations for upgrading the transfer station system and services, methods for extending the lifespan of Cedar Hills, and options for preparing the landfill for eventual closure. The Transfer Plan, approved by County Council in 2007, facilitated the construction of the Factoria Recycling and Transfer Station (completed in 2017) and South County Recycling and Transfer Station (completed in 2026), and the planning for the Northeast Recycling and Transfer Station (estimated to break ground in 2030). The requirements for Ordinance 14971 were fulfilled through the Transfer Plan and accompanying Council motions.

While the transfer station evaluations are no longer required, the division will continue performing evaluations at regular intervals. Once the next long-term disposal method is determined, the division will assess the County's recycling and transfer stations in relation to this new system of disposal.

Transfer System Improvements

The division continues the work to improve its transfer system as laid out in the 2019 Comp Plan:

- **Algona** – Close the station after it is replaced by the South County Recycling and Transfer Station (approved in the 2019 Comp Plan).
- **Houghton** – Close the station after it is replaced by the Northeast Recycling and Transfer Station (approved in the 2019 Comp Plan).
- **Renton** – Assess capacity and close the station (approved in the 2019 Comp Plan). It is recommended in this current plan that the division analyze impacts of its closure, as well as consider options for retaining the property for waste diversion, recycling, or other operational purposes.

The South County Recycling and Transfer Station project is slated to complete construction in 2026 and will replace the current facility in Algona. The Northeast Recycling and Transfer Station will be located in Kirkland and is expected to break ground in 2030. This facility will replace the aging Houghton transfer station. Figure 5-2 below shows the locations of existing and planned solid waste facilities.

All new stations will be built to similar standards of service and sustainability as the Bow Lake, Factoria, and Shoreline recycling and transfer stations. There will be differences to accommodate community needs (e.g., Factoria includes a fixed hazardous waste facility), and each station will be appropriately sized and designed to meet tonnage and customer requirements. All stations will have improved capacity, waste compactors, additional space for the collection of recyclable materials in line with Re+, and designs to eliminate fall hazards. The capacity to accept yard waste and other recyclables from self-haulers and to sort and remove recyclables from mixed loads will also be considered for new transfer facilities.

For each new station, the division will seek the highest appropriate environmental certification, as mandated by the County Green Building Ordinance KCC 18.17.

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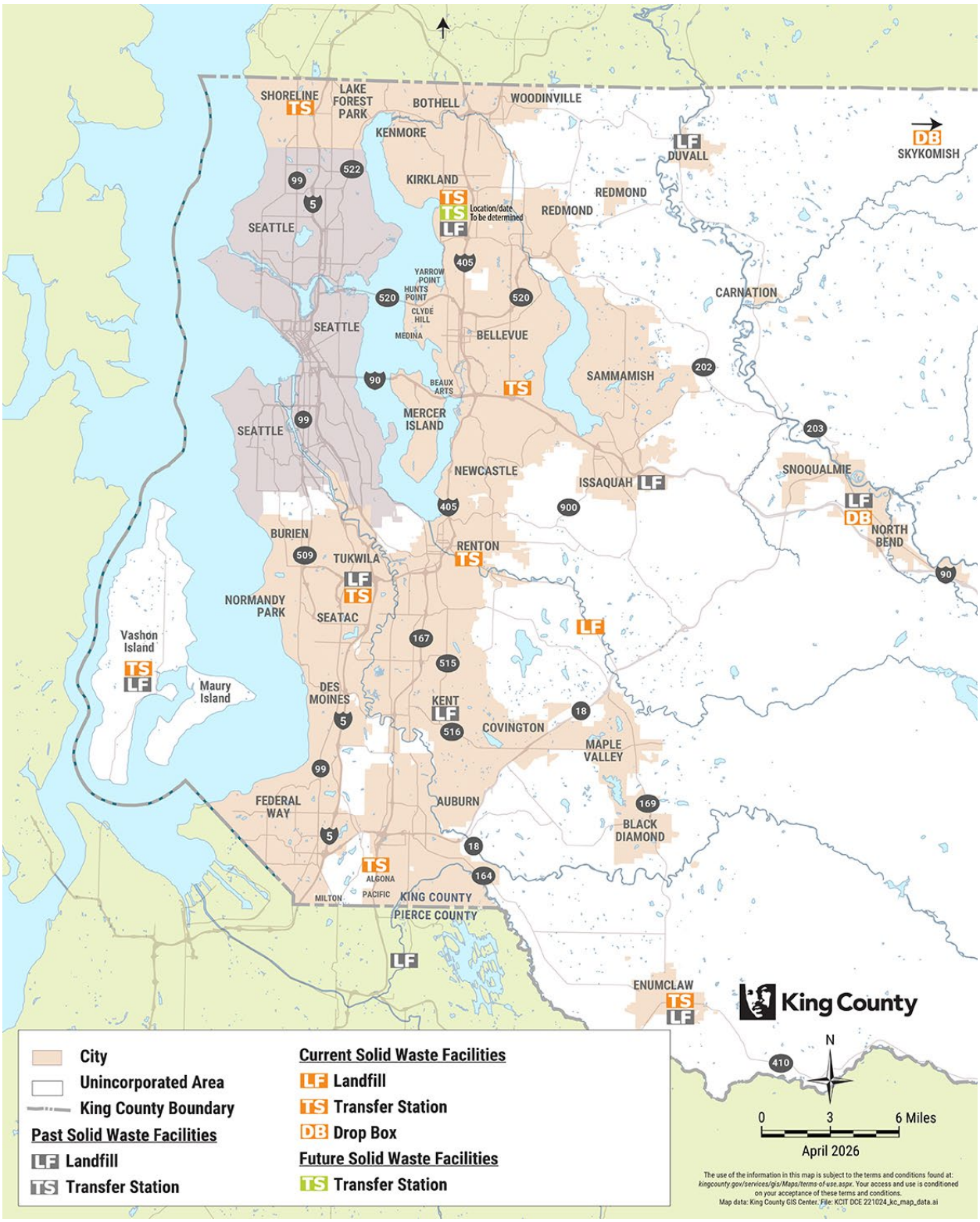
Figure 5-2. Locations of existing and planned solid waste facilities



The timeline for completing the siting, design, construction, and closure of the urban transfer stations is shown in Table 5-4.

Table 5-4. Estimated timeline for facility construction and closures

	South County	Algona	Northeast	Houghton	Renton
2026	Construction complete. Facility open.	Close.			
2027			Design & Permit		
2028					
2029					Study alternative uses.
2030			Construction		Close & retain for potential alternative use.
2031					
2032					
2033					
2034					
2035			Construction complete. Facility open.	Close.	

The Equity Impact Review

The Equity and Social Justice Strategic Plan 2016-2022 establishes a goal to "Develop facility and system improvements responsive to the values and priorities of residents and stakeholders and achieve pro-equity outcomes (King County 2016b)." The purpose of the Equity Impact Review (EIR) is to fulfill that goal and ensure that equity impacts are considered during the siting, design, and operation of a new facility. It is a process to identify, evaluate, and communicate the potential impacts on equity—both positive and negative—of the project. There are five phases of the EIR which correspond to the different stages of the project. For instance, an initial EIR was conducted during the siting of the South County Recycling and Transfer Station. The review identified the populations that would likely be impacted by the project and what the impacts might be. An expanded EIR and community engagement

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process led to design modifications of the South County Recycling and Transfer Station, including stream alignment, based on input from the Muckleshoot Indian Tribe.

The division will conduct periodic evaluations of urban transfer stations and continue to re-evaluate and update the transfer station evaluation criteria, as needed.

Building the New Northeast Recycling and Transfer Station

In 2020, King County's Solid Waste Division began a process to find a site for a new recycling and transfer station in northeast King County as approved in the 2019 Comp Plan. The new facility will replace the aging and outdated Houghton Transfer Station in Kirkland, in operation since the mid-1960s. A new station will provide convenient, accessible recycling and waste services to residents of Kirkland, Redmond, Woodinville, Sammamish, and areas of northeast unincorporated King County.

King County followed a step-by-step process to find a site for the new station. The County began by looking at many different sites and, through robust evaluation processes that included community input and a siting advisory group, narrowed the list down to two potential sites.

In July 2022, King County announced the alternatives that would be studied in an Environmental Impact Statement (EIS) under the State Environmental Policy Act. The draft EIS was issued in early 2024, and the final EIS was issued in March 2025.[39] The division chose Kirkland as the site for the Northeast Recycling and Transfer Station, with construction to begin in 2030.

Evaluation and Planning for the Rural Transfer Facilities

Historically, the rural areas were served by small community landfills. As those landfills closed, most were replaced by either a transfer station or a drop box. The Duvall and Hobart (near Maple Valley) landfills were closed without replacement. Currently, rural King County is served by two recycling and transfer stations, in Enumclaw and on Vashon Island; and two drop boxes, in North Bend (Cedar Falls) and Skykomish.

Criteria specific to the rural system were not developed because a preliminary look indicated that the rural facilities, for the most part, met the standards set for the urban system, although they may be open for fewer hours and days. To provide an appropriate level of service to area residents and the contract collectors, the division periodically reviews the operating hours of rural facilities and adjusts as needed.

The Enumclaw Recycling and Transfer Station, which opened in 1993, serves the City of Enumclaw and southeastern King County. The City of Enumclaw provides its own garbage collection service and transports the waste to the transfer station. The station offers a wide variety of recycling opportunities and is equipped with a waste compactor.

[39] https://kingcounty.gov/en/dept/dnrp/waste-services/garbage-recycling-compost/solid-waste-facilities/northeast-recycling-transfer-project/open-house

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The Vashon Recycling and Transfer Station opened in 1999 to serve residents and businesses on Vashon Island. It accepts a wide range of recyclables and is also equipped with a waste compactor. Because of its remote island location, the facility accepts some construction and demolition (C&D) materials and special wastes for disposal that the other stations do not. In response to implementation of the Organics Management Law and Re+ goals to increase diversion of organics from the landfill, the division has two capital projects to expand collection of source-separated organics at the station and build an organics processing facility on site to eliminate the need to haul organic materials off the island.

The division partners with Zero Waste Vashon, a community group focused on finding practical ways to recycle waste and to conduct a program that collects yard waste mixed with food waste. The division will continue to partner with Zero Waste Vashon to find solutions, which could include new facilities, to managing island waste in a cost-effective and environmentally appropriate fashion.

The division's drop boxes are scaled-down facilities, designed to provide cost-effective, convenient drop-off services in the more remote areas of the county. The Cedar Falls Drop Box, which opened in 1990, serves self-haulers in the North Bend area. It has three containers—two for garbage and one for yard waste—and provides a collection area for some recyclables.

The most remote facility operated by the division is a drop box in the town of Skykomish. Built in 1980, the drop box serves Skykomish and the communities of Grotto and Baring. Skykomish provides its own garbage collection service and takes the wastes to the Skykomish Drop Box. The drop box is also used by self-haulers, who can bring garbage and recyclables to the facility. The Skykomish facility is unstaffed; payment is made at an automated gate using a credit or debit card or a pre-paid solid waste disposal card. There are cameras at the site to monitor activities, and division staff makes regular visits to the site to perform maintenance. In addition, the King County Road Services Division has a facility next door, from which Roads staff help monitor the site.

Some rural area customers may be affected by changes to the urban transfer system, primarily self-haulers who currently use the Houghton or Renton transfer stations. The location of the Northeast Recycling and Transfer station may or may not adequately meet the service needs of rural areas. Should it be necessary, the division may consider siting more drop box facilities to serve residents. Construction of regional transfer stations in these rural areas is not being considered. The division recommends deferring decisions about whether to site drop boxes in these potentially underserved areas.

Electric Vehicles

The division operates a number of electric vehicles (EVs), including sedans, light-duty trucks, yard goats (terminal tractors used to move trailers within a yard), and a transfer truck that runs between the Enumclaw transfer station and the Cedar Hills Regional Landfill. In early 2024, the division began working with a consultant team on a plan to convert its light- and medium-duty fleets and as much of its off-road equipment as possible to EVs, and continue to pilot heavy-duty fleet EVs over the next decade

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to determine viability. Planning includes charging infrastructure and upgrades, coordination with other King County departments and other partners, policy recommendations, cost reduction opportunities, and new costs for EVs. These efforts will help bring the County closer to its electrification goals, as outlined in the 2025 Strategic Climate Action Plan.

City Mitigation

Transfer stations provide an essential and beneficial public service. However, the stations have the potential to cause undesirable impacts on host cities and neighboring communities, such as increased litter, odor, noise, road/curb damage, and traffic, as well as aesthetic impacts. The division works to mitigate these impacts in a number of ways, such as collecting litter, landscaping on and around the site, limiting waste kept on site overnight to reduce the potential for odor, making road modifications, and siting facilities on or near major roadways to keep traffic off local streets.

Seven cities in the division's service area currently have County-owned transfer facilities within their boundaries:

- **Algona** – the South County Recycling and Transfer Station
- **Bellevue** – the Factoria Recycling and Transfer Station
- **Enumclaw** – the Enumclaw Recycling and Transfer Station
- **Kirkland** – the Houghton Transfer Station
- **Renton** – the Renton Transfer Station
- **Shoreline** – the Shoreline Recycling and Transfer Station
- **Tukwila** – the Bow Lake Recycling and Transfer Station

As new transfer stations are constructed in the future, the division will work with host and neighboring cities to build stations that are compatible with the surrounding community. For example, during the design of the South County Recycling and Transfer Station, the division worked closely with the community to identify impacts and mitigation measures. The results of this work include the realignment of West Valley Highway South, improving a dangerous curve that didn't meet National Transportation Safety requirements; sponsoring a cohort of local youth in wetlands restoration training and working with King County Parks to provide support for Interurban Trail wayfinding improvements; and the installation of stormwater detention ponds on site, reducing stormwater flows into area conveyances.

The Amended and Restated ILA (included in its entirety in Appendix C) identifies the roles and responsibilities of the County and the cities in the regional solid waste system. The County agrees to collaborate with host and neighboring cities on both environmental review and project permitting. In addition, the Amended and Restated ILA recognizes that, in accordance with RCW 36.58.080, a city is authorized to charge counties to mitigate impacts directly attributable to a county-owned solid waste facility. It must be established that such charges are reasonably necessary to lessen or eliminate impacts, and that revenue generated may only be used for impact-mitigation purposes. Direct impacts may

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include wear and tear on infrastructure, including roads. The city and county will work cooperatively to determine the extent of the impacts and appropriate mitigation payments and will document any agreement. Mitigation, including any necessary analysis, is a cost for the solid waste system and, as such, would need to be included in the solid waste rate.

Equity, Racial, and Social Justice at Transfer Stations

The Solid Waste Division (SWD) prioritizes providing equitable services in transfer stations. One way has been through multilingual access in signage and at scale houses when communicating with customers. In 2024, transfer stations redesigned signage to include bilingual messaging in Spanish and signs with pictures. Scale house operators continue to utilize a languages line—a hotline for multiple King County languages that community members can utilize at scale houses to speak to a translator about King County transfer station services. In 2027, the SWD will audit and consider changes to the current multilingual access plan to more effectively support communities using the facilities.

Through the CleanUp Lift program[40], established in 2019, residents who qualify for the Low-Income Discount program will continue to be eligible to receive discounts on disposing of materials at King County's recycling and garbage transfer facilities. To qualify, residents' household income (before taxes) must be no more than 200% of the Federal Poverty Level, as established by the U.S. Health and Human Services Department. Those receiving Apple Health Medicaid, WIC, and Basic Food are eligible for the program.

The division is also developing a Low-Income Discount program for curbside solid waste services in unincorporated King County that is planned to launch by 2027, with the same income eligibility standard.

Regarding the safety of employees, SWD continues to fully Implement King County's Nondiscrimination, Anti-Harassment & Inappropriate Conduct Policy & Reporting Procedures in order to maintain a respectful, productive, inclusive, and equitable workplace. The division also sets expectations and implements (RCW 9A.76.180) which prevents the intimidation of a public servant. SWD is committed to creating an equitable and inclusive environment for the public and its employees.

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[40] https://cdn.kingcounty.gov/-/media/king-county/depts/dnrp/waste-services/garbage-recycling-compost/solid-waste-facilities/documents/clean-up-lift-brochure.pdf?rev=836dad41cf9245f1a6e642f8cdd4dc74&hash=4D6D37E216A94DC5E02FA74D06463C95

Solid Waste Services After an Emergency

Relatively common emergencies, such as seasonal flooding and winter storms, as well as major events, such as earthquakes, can create a significant amount of debris. Debris generated during these types of events can obstruct roadways, cause power outages, and interrupt essential services. A coordinated and effective plan ensures that debris is properly managed to lessen the impacts on communities, the economy, and the environment in the immediate aftermath of an emergency without causing additional problems later in recovery.

To this end, the division—as the lead for debris management operations in the county—has prepared the King County Disaster Debris Management Framework[41]. The framework provides guidance to prepare for, respond to, and recover from a disaster debris-causing incident with the goal of preventing health problems, protecting lives and property, and reducing environmental harm. It describes how the County and its regional partners will remove debris as quickly as possible and maximize potential reimbursements. The plan applies to unincorporated King County and supports the 37 incorporated cities that are part of the King County solid waste system.

The Debris Management Framework stipulates that, during emergency response and recovery, the roles within the King County solid waste system do not change. This means that the division will continue to accept municipal solid waste (MSW) at the transfer stations to the extent possible and will maximize recycling in accordance with RCW 70.95.010 (8) and KCC Title 10, particularly since the debris created by a larger event, such as an earthquake, would likely consist primarily of recyclable materials, such as concrete, metal, and wood.

The Debris Management Framework is coordinated with emergency plans prepared by other jurisdictions to maximize the recycling of these materials. The division works with the King County Regional Communications and Emergency Coordination Center and other partners to coordinate public information and help cities and residents identify recycling options in the event of a debris-causing emergency. Recycling the majority of emergency debris will maximize the division's capacity to continue to handle MSW over the short and long term.

The division will also maximize the use of existing transfer facilities after an emergency through operational measures such as increased staffing or hours. If some transfer facilities are closed or damaged as a result of the event, customers will be rerouted to operating stations, and contract haulers may be routed directly to the Cedar Hills Landfill. The County and the cities may establish temporary debris collection sites, where disaster debris can be staged, sorted, and prepared for recycling or proper disposal. While potential sites are identified in the Debris Management Framework and in cities' individual debris management plans, the sites listed in the County framework are not exhaustive, and final site selection is made at the time of the incident, based on real-time assessments, including proximity to the impacted area, site accessibility, current site conditions (e.g., not flooded or damaged), availability, and compatibility with other emergency uses.

[41] http://your.kingcounty.gov/dnrp/library/solid-waste/facilities/disaster-debris-management-plan.pdf

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The division applies learnings from emergency activations and major weather events to continuously strengthen overall system resilience as climate-related hazards become more frequent and severe. For example, after the November 2024 "bomb cyclone" knocked out electricity to all SWD transfer stations, Bow Lake, Factoria, and Shoreline recycling and transfer stations were modified to support the use of mobile generators to maintain compactor and scale operations during extended power outages. In response to the catastrophic flooding in December 2025, the division activated the KC Disaster Debris Management Framework and opened temporary debris collection sites in Ravensdale, Issaquah, and Duvall to support residents impacted by the floods. These experiences have informed updates to the division's continuity planning, site-specific emergency procedures, and regional coordination processes to help maintain essential functions during future emergencies.

A regional approach to planning is essential for managing the multijurisdictional impacts of emergencies in the Puget Sound area and for coordinating the limited disposal capacity in Western Washington. This disposal capacity is subject to two major constraints. First, most jurisdictions in the Puget Sound region export their solid waste to landfills east of the Cascade Mountains. Without local landfill space, disposal capacity relies on the region's transportation network, which could be compromised in a major emergency. Second, Cedar Hills is the only operational landfill in King County and does not accept disposal of C&D debris, which is the most common aftermath of high-impact incidents, but only MSW (for more information on C&D waste disposal, see Chapter 2, *The Current Solid Waste System*). Recognizing that MSW facilities are subject to mid- and long-term service disruptions due to natural disasters and other emergencies, a mutual aid agreement has been established between King County and the City of Seattle, which allows the transfer of MSW between one another during times of public health and safety emergencies in order to maintain public health and safety. Depending on the scope and scale of the disaster or emergency, this mutual aid agreement may provide relief to King County during a disaster debris generating scenario.

Processing Collected Materials

Processing Commingled Recyclables

Commingled recyclables are mixed recyclable materials that are collected together. The division expects that the private sector will continue to expand processing capacity for commingled recyclables as the need arises. In addition, numerous other private-sector facilities have emerged across the county, where individual residents and businesses can bring source-separated recyclables for processing—from paper, cans, and bottles to printer cartridges and cellular telephones.

While the conversion to commingled collection makes recycling easier for consumers and has resulted in increased recycling, it presents some challenges for the recovery and processing facilities. One of the challenges is cross-contamination of materials as they are sorted and separated. This is a problem particularly for the paper stream, where materials, such as plastic milk jugs, end up baled with paper. Plastic bags sometimes get caught in the sorting machinery at MRFs, jamming up the equipment, and can blow around, causing a litter issue. Paper mills overseas typically perform additional sorting of the

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materials to recover misplaced recyclables; however, most domestic paper mills dispose of these materials. In the case of glass, even small amounts of contamination in the sorted material can reduce the quality and affect the potential end use of the recycled glass. These problems illustrate a fundamental conflict between the benefits of commingled recycling, which makes collection easier and leads to increased recycling, and the need for the MRFs and end users to minimize the costs of handling these materials.

Types of Contamination

Nonrecyclables – Materials that aren't recyclable, such as nonrecyclable paper, plastics, glass, textiles, and packaging made of two or more material types.

Dirty Recyclables – Recyclable materials that are not clean, such as food-soiled plastics. Only clean materials are accepted for recycling.

Wet Recyclables – Recyclable materials that are unable to be accepted for recycling due to moisture. Only dry materials are accepted for recycling.

For the processing of commingled recyclables to be most efficient, it is important for consumers to be careful about preventing contamination in the recycled loads. This can be accomplished by: 1) preparing recyclables for the collection cart (i.e., rinsing out bottles and jars, breaking down cardboard boxes), 2) placing materials in the proper collection container, and 3) closing container lids to keep materials dry. Contamination in the recyclables can cause a wide array of problems during processing, which can lead to a reduction in the value of the materials processed for market or, in extreme cases, the disposal of entire mixed loads. This issue can best be remedied through education programs on proper recycling techniques offered through local governments and the collection companies. See Chapter 4, *The Circular Economy*, for a discussion of issues regarding markets.

The recommended role of the County and cities is to focus on reducing waste, and increasing the supply and improving the quality of recyclable materials delivered to processors. The value of materials for recycling can be maximized through: 1) public education to decrease contamination in the recycling stream and ensure that materials are properly prepared before being placed in the recycling container, and 2) market development that encourages businesses to invest in technologies used to sort and process recyclables.

The use of consistent public messaging is critical to reducing contamination in curbside recycling and compost collection. The division, along with Seattle Public Utilities, Ecology, haulers, and other King County cities, formed the Recycle Right Communication Consortium in 2019 with the purpose of creating harmonized public messaging around composting and recycling. The consortium meets monthly to coordinate on public messaging campaigns.

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Processing Organics

Organic waste (yard, wood and food waste) represents the largest recyclable commodity that is landfilled—320,000 tons, more than a quarter of the total tons disposed at Cedar Hills landfill. Diverting these materials is key to meeting the County's goals. Composting is currently the primary processing option for these materials in the region.

The three major processors shown in Table 5-5 below currently utilize approximately 70% of the region's annual processing permit, although individual site capacity during high-volume periods poses a barrier to handling increasing amounts of material.

[Table 5-5. Regional Compost Facilities]

2025 Summary of organics recycled by region				
Jurisdiction	King County	City of Seattle	Snohomish County	**TOTAL**
Tons per Year	236,540	155,396	75,188	467,124
2025 Summary of organics permitted capacity by processor				
Processor	Cedar Grove: Maple Valley	Cedar Grove: Everett	Lenz: Stanwood	**TOTAL**
Address	17825 Cedar Grove Road SE, Maple Valley, WA	3260 36th Place NE, Everett, WA	5210 SR 532, Stanwood, WA	
Tons per Year	250,000	228,000	150,000	628,000

Cedar Grove is the only facility in King County permitted to handle food waste. Relying on one large regional facility that is operating near its maximum permitted capacity is cause for concern, particularly if the region is to increase the amount of organics that are recycled instead of being disposed. Although a new smaller facility, Winton Compost, has begun operations in central Washington, capacity can be constrained by costs of transport. Organics also cannot be transported to farther parts of central/eastern Washington due to the Washington State Apple Maggot Quarantine regulations (RCW 17.24).

Maintaining the quality of finished product is critical to compost markets. Possible processing challenges include:

- There is ongoing concern for contamination in composting feedstocks as more material is diverted from the landfill, particularly from glass and plastic film.
- Composting feedstocks (e.g., yard waste, food waste, manures, bedding, etc.) are in transition. Many regional commercial facilities were largely designed for yard waste, not the mix of food,

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yard waste, and compostable packaging that is collected and processed today. A need exists for upgraded technology to manage the new material mix.

- Processors have expressed a desire to better anticipate the future feedstock mix, noting a need for better information on volumes and incoming materials to inform investments in capacity, equipment, and labor.
- The need for financing for technology upgrades at existing facilities remains high.
- Composters report that market prices and sales for compost products have been stable. However, maintaining the quality of finished product is key to maintaining adequate market demand for compost. Processors must balance the costs of adding processing steps (such as for additional contaminant removal) with maintaining competitive market prices for finished product.

If organics diversion is to significantly increase in King County and the surrounding region, more processing capacity will be needed. In order to significantly increase diversion of organic materials that are disposed of from single and multifamily homes and businesses, a regional dialogue is necessary to explore alternatives for expanding capacity. This will help minimize environmental and community impacts related to regional organics processing and ensure adequate capacity and infrastructure is in place for regional organics processing, including contingency plans in the event that regional capacity is constrained.

A range of options should be pursued to address organics recycling capacity, including continued organics and soils education to promote the recycling and use of organics on landscapes, market development (such as local buy-back programs), the pursuit of new technologies, and additional private or public infrastructure development.

Emerging Processing Technologies

Resource recovery goes beyond sorting, and includes technologies such as anaerobic digestion, mixed-waste processing, pyrolysis, and gasification. Pyrolysis and gasification, two examples of thermal conversion technologies, hold promise for the future but are not yet able to reliably handle the amount of waste in King County's system. A brief discussion of anaerobic digestion and advanced materials recovery follows. For a discussion on pyrolysis and gasification, see Chapter 6, *Landfill Management and Solid Waste Disposal*.

Anaerobic Digestion

In 2016, the division hired HDR Engineering to evaluate options for adding anaerobic digestion to regional organics processing (HDR 2017). Anaerobic digestion is a biological process that, through the use of high heat in the absence of oxygen, transforms organic waste into renewable energy and, in some situations, a useable residual by-product. HDR evaluated anaerobic digestion technologies using both source-separated organics with minimal contamination, and MSW containing approximately one third organic waste. The division required HDR to focus on local conditions, feedstocks, and markets.

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While the study does not identify a clear role for anaerobic digestion in the county's solid waste system, it does recommend further research into several small-scale anaerobic digestion options for source-separated organics, with varying levels of public- and private-sector collaboration. For instance, during the 2022-2023 grant cycle, Re+ grant money was used to increase production of a small-scale anaerobic digestor on Vashon Island, allowing the digestor operator to partner with local farmers to distribute their biofertilizer byproduct. Source-separated, organics-based anaerobic digestion solutions are currently more affordable and more reliable than MSW-based systems. As a feedstock, MSW typically requires advanced pre-processing, which is costly and has mixed success rates.

Source-separated organics in King County are currently managed by private-sector companies and do not come to the County's transfer stations. However, source-separated organics are likely the best feedstock for successful anaerobic digestion, based on minimal contamination, which lowers pre-processing costs, eases the anaerobic digestion process, and results in a marketable organic byproduct.

Co-Digestion

Co-digestion is a type of anaerobic digestion where two types of organic wastes are combined and treated together. This process produces renewable energy in the form of gas, as well as a nutrient-rich soil amendment that can be used in a composting process. The division completed a feasibility study on options for combining food waste and wastewater treatment solids. More analysis and discussion with the Wastewater Treatment Division is needed before making a decision on whether to pursue co-digestion.

Advanced Materials Recovery and Mixed-Waste Processing

Advanced materials recovery can include a variety of methods to pull resources from MSW. As envisioned at the County recycling and transfer stations, it could involve both floor sorting of recyclables by division staff and installing some automated mechanical sorting systems at select facilities (most likely the newer transfer stations and stations under development).

An additional consideration might be a separate mixed-waste processing facility (public, private, or a partnership) to support the many other regional efforts to reach the division's zero waste of resources goal.

This alternative could reach recycling goals more quickly than waste prevention would, as it relies less on changes in customer behavior. However, feasible system configurations and cost effectiveness are not yet known and would require more study, including a cost-benefit analysis, which was approved through the 2019 Comp Plan.

In 2024 and 2025, the division worked with consultants RRS to evaluate mixed-waste processing systems that could support King County's recycling and recovery goals.[42] The evaluation included technological, economic, environmental, and social impacts of a potential facility. Based on the results of

[42] https://kingcounty.gov/en/dept/dnrp/waste-services/garbage-recycling-compost/solid-waste-planning-monitoring/comprehensive-solid-waste-management-plan#toc-Feasibility-studies

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the evaluation, the division will pursue non-capital projects, including further research and outreach to facility operators, and mixed-waste processing pilot projects. A mixed-waste processing capital project may be considered in the future.

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Chapter 6 – Landfill Management and Solid Waste Disposal

Policies

D-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.
D-2	Maximize the capacity and lifespan of the Cedar Hills Regional Landfill.
D-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.
D-4	Plan for future disposal when the Cedar Hills Regional Landfill closes to ensure no gap in service. Siting a replacement landfill located in King County will not be considered.
D-5	Garbage shall not be disposed of, nor shall soils be stockpiled, within 1,000 feet of the property line at the landfill, in accordance with the Settlement Agreement, unless otherwise authorized. SWD shall reserve sufficient funds to acquire any parcels from willing sellers as necessary to establish or maintain the buffer.
D-6	Maintain a bird management plan for Cedar Hills Regional Landfill.
D-7	Work with local and regional authorities to maintain an updated King County Disaster Debris Management Framework.

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Summary of Recommended Actions

The following table includes a menu of recommended actions that the County and the cities should implement. Under the responsibility column, the entity listed first has primary responsibility for the action.

Action Number and Responsibility	Action	Detailed Discussion
1-d County, cities, advisory committees *	Begin planning work to transition to and implement [insert LTD method here], the County's next long-term disposal method, to ensure adequate lead time ahead of Cedar Hills Regional Landfill closure.	Page #-#
2-d County	Continue to monitor other disposal and conversion technologies for their potential to handle all or a portion of the county's future waste.	Page #-#
3-d County	Seek ways to restore plant operations and resume converting landfill gas to pipeline-quality natural gas.	Page #-#
4-d County, cities, Tribal governments, advisory committees	Coordinate with regional partners and area governments on mutual aid agreements to plan for emergencies, service disruptions, and disaster debris management while preserving landfill space.	Page #-#
5-d County	Investigate beneficial reuse options for closed landfills, guided by community engagement input where feasible, and design monitoring and environmental systems that will facilitate reuse of the properties and provide continued benefit to the surrounding communities.	Page #-#
6-d County	Secure a method to export waste in the case of emergency or delay in landfill development.	Page #-#

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Landfill Management and Solid Waste Disposal

This chapter discusses the County's current space-maximizing disposal practices at the Cedar Hills Regional Landfill (Cedar Hills) and presents alternatives for the County's next long-term disposal method, which must be decided upon as part of the approval of this Comp Plan. Finally, it addresses how past disposal sites (closed landfills) are managed.

Maximizing Space at the Cedar Hills Regional Landfill

For more than 50 years, King County has relied on Cedar Hills as a local means of cost-effective solid waste disposal. The County has proactively used several approaches to maximize value for ratepayers and extend the landfill's life beyond forecasted closure dates. The division engages three primary strategies for extending landfill life: diversion of waste, operational efficiencies, and new area development.

Diversion of Waste

Waste is currently diverted from Cedar Hills through two primary methods: 1) waste prevention and recycling, and 2) a ban on the acceptance of hazardous waste and most construction and demolition (C&D) debris.

Waste prevention and recycling efforts have proven to be the most successful strategy for extending the life of the landfill. During a 20-year period, an estimated 10 million tons of materials that would otherwise have been disposed of in the landfill were recycled, extending the landfill's life by approximately 10 years.

Banning most C&D debris from Cedar Hills has also contributed to extending landfill life. Since the disposal ban went into effect in 1994, an estimated 5 million tons of C&D debris has been diverted from the landfill. (See Chapter 4, *The Circular Economy* for more information about C&D debris recycling and disposal.)

Since 2019, the division has focused on extending the life of the landfill by diverting materials from the landfill through various methods:

- Expanding the number of materials collected for recycling at transfer stations. Materials collected now include cardboard, scrap metal, yard waste, clean wood, mattresses, tires, Styrofoam, and plastic film.
- Expanding capacity for receiving recyclables from customers. Efforts include building bunkers for materials, adding trailers for collection, and adding compactors and balers to densify loads and preserve receiving capacity.
- Standardizing operational materials recovery practices to remove materials of value from the waste received at transfer stations.

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- Implementing Re+, King County's zero waste of resources program, focused on waste diversion through programmatic, grant, and policy interventions. Efforts include, but are not limited to, organics and food waste recycling, paper and packaging reduction, and wood and yard waste collection. (See Chapter 4, *The Circular Economy* for more information about King County's Re+ initiative.)

Potential Strategies for Waste Diversion

The County will continue to evaluate disposal, diversion, and recovery methods for future implementation. As the County sees impacts from programs like Re+, additional materials and efforts will be explored to minimize waste going to Cedar Hills and [next LTD method here], including waste conversion technologies, such as anaerobic digestion or demonstration projects of other evolving technologies that promote resource recovery, such as mixed-waste processing. Environmental, social, economic, and other criteria would factor into any waste diversion decision.

Further details on the division's waste diversion and recovery strategies can be found in Chapter 4, *The Circular Economy.*

Organics Management Law

Washington's organics management laws, passed in 2022, 2023, and 2024, will divert organics from landfills and reduce methane emissions, as well as prolong the lifespan of Cedar Hills by helping to maximize landfill airspace.

Operational Efficiencies

The division has made a series of operational changes to increase landfill capacity and density. These changes include reducing the amount of soil and rock buried in the landfill, using more efficient unloading and compaction equipment, and taking advantage of natural settlement. Some of the key changes and efficiencies achieved are described below:

- The division has implemented strategies to minimize the placement of soil in the landfill. For example, in the past, six inches of compacted soil was used to cover the entire surface of the active solid waste disposal area at the end of each working day. Daily cover serves to control litter and discourage foraging by animals, such as rodents and birds. However, the use of soil consumes valuable landfill space. The division now uses retractable tarps to cover most of the waste at the end of each day to reduce the amount of soil buried in the landfill. The tarps serve the same function as daily soil cover. At the start of each day's operations, the tarps are rolled up, and more solid waste is placed directly on top of the previous day's waste. Soil is still used to cover side slope areas. However, as much of this soil is removed as possible before more waste is placed, and the soil is then reused. Together, these practices have resulted in a reduction of the volume of soil buried in the landfill.
- Tippers now empty trailers and containers, replacing the walking-floor trailers previously used. Walking-floor trailers require a large, rock-covered surface for the trucks to drive on as the walking floor rolls the garbage out the back of the trailer. These large rock surfaces are not

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required with the tippers. Instead, the garbage trailers are backed onto the tipper, which tilts the trailer up, allowing the garbage to slide out of the back and into the refuse area. The use of tippers not only reduces the use of rock, it also decreases unloading time for each trailer by at least half compared to walking floors and reduces damage to equipment and tires.

- Heavier equipment and improved methods have increased waste compaction. Packing the waste to a greater density preserves airspace for additional solid waste in each landfill area.
- Another strategy for increasing landfill capacity is taking advantage of the natural settlement that occurs as waste decomposes after being placed in each area. As this natural settling occurs, the level of the landfill drops below the permitted height, allowing more waste to be added to bring the height of a previously filled area back up to its planned level. The division uses soil stockpiles to help advance this settlement. To take advantage of this natural settlement, the division has delayed final closure of Areas 5 and 6 at Cedar Hills to allow settling to occur so that additional waste can be added before final cover is applied.
- The division periodically deploys drones to evaluate several landfill performance measures, including landfill settlement and area airspace.

With these operational changes, more solid waste can be placed within the already designed and permitted refuse areas. The division will continue to pursue these and other best management practices that preserve airspace and make more efficient use of landfill capacity. The division will also work with subject matter experts to determine best practices related to use of top lifts and temporary covers, including how long temporary covers should be used prior to applying final cover.

New area development

Expansion of the landfill will provide additional capacity for disposal at Cedar Hills. Since the adoption of the 2019 Comp Plan, the County has begun increasing capacity in Areas 5 and 6 of the landfill and will develop the new Area 9, allowing Cedar Hills to remain open through approximately 2038. More information on this can be found below.

Landfill capacity can be further extended if recycling increases, economic recessions occur, or more complex development approaches are used.

Landfill capacity – The amount of space, often referred to as "airspace," which is permitted and available for disposal of waste. Landfill capacity is calculated based on the height, footprint, and slopes of the landfill.

Density – How tightly materials are packed together—in this case, solid waste—in the landfill. A higher density means more waste can be packed into a given amount of space. The density of solid waste within the landfill is a function of operational practices, the types of waste, and natural processes. Density is increased as waste is compacted with heavy machinery on the face of the landfill and by natural settling that occurs over time as solid waste decomposes.

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New Area Development

During 2019 and 2022, the division explored alternatives for developing new refuse areas to extend landfill life at Cedar Hills. A wide range of alternatives was identified. Based on a preliminary assessment of operational and engineering feasibility, as well as likely environmental impacts, three action alternatives were developed that would extend landfill life for an additional three to 13 years beyond the then-projected closure date. The evaluation included options for relocating solid waste support facilities. The environmental impacts of these alternatives were evaluated in an environmental impact statement (EIS), with the Final EIS issued in March 2022. The EIS determined that the three action alternatives analyzed would not result in any significant unavoidable adverse environmental impacts compared with the "no action" alternative (KCSWD 2022).

The preferred alternative from the 2022 Final EIS would develop approximately 34 acres for construction of a new refuse area at the southeast portion of the Cedar Hills (Area 9), with landfilling in Areas 8 and 9 to an elevation that does not exceed 830 feet above mean sea level. Landfilling would also occur in existing landfill Areas 5 and 6, to no more than 788 feet above mean sea level. Additional landfilling to 788 feet would take place in approximately nine acres in the southern portion of Areas 2/3, 4, and the Central Pit. No additional landfilling would take place in the Main Hill, Southeast Pit, or Area 7. Based on current tonnage predictions, this alternative would add approximately 13 million cubic yards and 10 more years (to approximately 2040) to the landfill capacity.

Permitted Capacity Planned for Cedar Hills through 2038

Cedar Hills has built capacity remaining in Areas 5, 6, and 8. The estimated capacities are based on the difference between existing landfill contours shown in an October 2024 aerial survey and the approved design contours at completion.

As the landfill ages, it settles due to compaction and loss of mass from leachate and from gas production. The added airspace resulting from the settlement can be recovered for disposal. As gas is collected, it is removed from the landfill. The airspace that the gas once occupied consolidates and the landfill settles. Soil stockpiling can be used to accelerate refuse compaction and settlement; Areas 5 and 6 both have soil stockpiled over them for that purpose. This soil will be recovered later for other uses. Cedar Hills has additional planned capacity in Area 8. A top lift is planned to bring Area 8 to its maximum height, no more than the permitted maximum design elevation of 830 feet. Such activity would be done only to the extent that it would be consistent with the terms and conditions of the Settlement Agreement, which requires that King County make a good-faith effort to keep the maximum height of Areas 5 and 6 at or below 788 feet above sea level.

Area 9 will be the last new area to be constructed at Cedar Hills.

The table below presents current and planned capacity, in cubic yards and tons by area, as of January 23, 2025. It is based on an airspace utilization of 1,600 pounds of refuse disposed per cubic yard of airspace consumed, and a yearly average of 872,000 tons, forecasted between 2017 and 2028. In Area 7, current

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operational practices (compaction, daily cover usage, and rock recovery) result in an airspace utilization of 1,600 pounds per cubic yard.

Area Capacity	Estimated Cubic Yards	Estimated Tons	Estimated Number of Years
Area 5 Top Lift	1,923,000	1,538,400	1.4
Area 6 Top Lift	1,367,000	1,093,600	1
Area 8	2,339,000	1,871,200	2.2
Area 9 (not yet permitted)	8,800,000	7,040,000	8.5
Total	14,429,000	11,543,200	13.1

Landfill Gas Collection and Utilization

Landfill gas is generated through the decomposition of waste buried in the landfill. The gas consists of about 50-60% methane, with the remainder made up of carbon dioxide and trace amounts of oxygen, nitrogen, and other gases. Landfill gas from Cedar Hills is collected by using motor blowers to create a vacuum in perforated pipes within the solid waste. In a public/private partnership, Bio Energy Washington began operating a landfill gas-to-energy facility at the landfill in 2010. This facility runs landfill gas through a series of processors that remove and destroy harmful components and convert the methane portion of the gas into pipeline-quality natural gas. However, in mid-2023, Bio Energy Washington ceased operations. At that time, the division reverted to routing the landfill gas to high-temperature flares, where it was burned to safely destroy any harmful emissions, a process known as "flaring." The landfill gas-to-energy facility, now known as Cedar Hills Renewable Gas to Energy (CHRGE), was purchased by SWD in 2025 and has re-instated gas collection operations. (More information on converting landfill gas to pipeline-quality gas can be found in Chapter 2, *The Existing Solid Waste System*.)

Disposal Services After an Emergency

The *King County Disaster Debris Management Framework* (Debris Management Framework) outlines the process for managing disaster debris within the boundaries of unincorporated King County and for coordinating with the 37 cities with which King County has interlocal agreements (KCSWD 2024a). The Debris Management Framework is aligned with other national, state, and county plans, including the 2020 *King County Comprehensive Emergency Management Plan,* as well as regulations and policies that will affect how King County manages disaster debris.

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The division is actively pursuing policies and actions to address disruptions to disposal services that may occur in the region. Disruptions may be due to natural disasters and emergencies such as fires, accidents, personnel shortages, shipping disruptions, trucking disruptions, and rail disruptions. The division is also engaging partners to ensure a comprehensive and regional approach to providing and receiving assistance during certain emergencies, with a primary goal of preserving space at Cedar Hills.

The division is well under way in developing a mutual aid agreement with Seattle Public Utilities and is about to embark on negotiating with Snohomish County. Once each agreement is complete, the division will seek County Council approval. When implemented, these agreements will facilitate the division with being nimble in both requesting assistance and assisting others in times of emergency that either rise to the level of emergency declaration or those that are significant service disruptions. The terms of assistance are to be worked out upon activation of the agreement, each time it is activated.

A regional approach to planning is essential for managing the multijurisdictional impacts of emergencies in the Puget Sound area and for coordinating the limited disposal capacity in Western Washington. This disposal capacity is subject to two major constraints. First, most jurisdictions in the region export their solid waste to landfills east of the Cascade Mountains. Without local landfill space, disposal capacity relies on the region's transportation network, which could be compromised in a major emergency. Second, the only operational landfill in King County, Cedar Hills, accepts only MSW for disposal and does not accept large amounts of C&D debris per King County Code (KCC 10.30.020), which is the most common debris generated by high-impact incidents.

The coordinated regional Debris Management Framework emphasizes recycling to the extent possible. The framework calls for the use of temporary debris management sites for storage of debris until it can be sorted for recycling or proper disposal.

The division has worked with the King County Regional Communications and Emergency Coordination Center to coordinate public information and help cities and residents identify recycling options in preparation for, and in response to, emergency events of all types.

The Next Disposal Option

A Disposal Option Must Be Selected as Part of This Plan's Approval

In accordance with the 2019 Comp Plan, the County's next long-term disposal method is included in this plan. County forecasts estimate that Cedar Hills will reach capacity by 2040, following the closures of Areas 5 and 6, and the development, use, and closure of Area 9. The inclusion of the County's next long-term disposal method in this Comp Plan allows for lead time to complete financial, operational, and infrastructure preparations in advance of 2040.

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[Next Long-Term Disposal Method here!] is Recommended

[The next Long-Term Disposal Method here. Include impacts and why it was chosen]. The *King County Long-Term Waste Disposal Options Study* showed that only two of the five disposal methods analyzed were capable of handling King County's waste: mass burn with waste export and waste export by rail (Tetra Tech 2025).

Waste Export by Rail

Exporting waste by rail involves trucking waste from transfer stations to an existing intermodal facility where the waste is loaded onto trains. These trains transport the waste to a landfill located in either southeastern Washington or northeastern Oregon. Waste export by rail is currently the primary disposal method for the City of Seattle and several counties in Western Washington. This method of disposal is more affordable than mass burn but performs worse in several environmental metrics.

Mass Burn

Mass burn is one method of waste-to-energy where waste is placed in an incinerator and burned to create energy in the form of heat, steam, and electricity. The leftover ash from this process would be exported by rail to an ash monofill located in southeastern Washington or northeastern Oregon. Whereas waste export can use existing infrastructure, mass burn would necessitate building one or more new facilities within King County, leading to much steeper rate increases for rate payers.

Hybrid Option

The division also analyzed the impacts of combining one smaller mass burn facility with rail export. The Mass Burn facility included in the analysis would incinerate 367,000 tons per year, while the rest of the waste, about 300,000 tons expected by the year 2040, would be exported by train. [The results of this analysis will be included here once this work has concluded.]

Other Long-Term Disposal Options Considered

Analyses of gasification, pyrolysis, and refuse-derived fuel (RDF) are also included in the *Long-Term Waste Disposal Options Study* but were removed from consideration as long-term disposal options at the recommendation of both SWAC and MSWAC. It was determined that these disposal methods are not capable of meeting the waste needs of SWD's service area. Details on these capacity issues are provided below.

Gasification

Gasification is a commercially proven manufacturing process that converts hydrocarbons, such as coal, petroleum coke, biomass (wood and agricultural crops or wastes), and other organics, to a "synthesis gas" (syngas), which can be further processed to produce chemicals, fertilizers, liquid fuels, hydrogen, and electricity. In a gasification facility, hydrocarbon feedstock is injected with air or oxygen and steam into a high-temperature, pressurized reactor until the chemical bonds of the feedstock are broken. The

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resulting reaction produces the syngas. The syngas is then cleansed to remove impurities, such as sulfur, mercury, particulates, and trace minerals. Syngas is used for heating and power generation.

The composition of MSW in the SWD system is very heterogeneous, containing a wide array of materials, which makes it a challenging and uncommon feedstock for gasification systems. Most gasification facilities are demonstration or pilot plants that process under 20,000 tons per year of a homogeneous feedstock, such as biomass (organics/wood waste), plastics, coal, or tires (Tetra Tech 2025). Because gasification cannot handle both the waste composition and the tonnage amounts in the SWD system, this disposal method was not considered for the County's next long-term disposal method.

Pyrolysis

Pyrolysis involves the thermal decomposition of feedstock at high temperatures (750°F–1,500°F) in the absence of oxygen. The resulting end-product is a mixture of solids (char), liquids (oxygenated oils), and gases (methane, carbon monoxide, and carbon dioxide). The oils and fuel gases can be used directly as boiler fuel or refined for higher-quality uses, such as engine fuels, chemicals, adhesives, and other products. The solid residue contains most of the inorganic portion of the feedstock as well as large amounts of solid carbon or "char." Like gasification, few pyrolysis facilities are capable of processing the tonnage amounts forecasted for 2040 and, of those, none currently process MSW. The typical feedstocks for pyrolysis are plastics or wood waste. Because pyrolysis cannot handle both the waste composition and the tonnage amounts in the SWD system, this disposal method was not considered for the County's next long-term disposal method.

Refuse-Derived Fuel

Refuse-derived fuel (RDF) is not a disposal method but a mechanical process that leads to disposal. In this process, waste material is screened, sorted, and shredded, then transformed into pellets or fluff for use as feedstock in electricity-generating plants and cement kilns. RDF is used as a replacement for coal because it produces fewer emissions than coal when burned.

RDF facilities can process the forecasted high tonnage amount included in the Tetra Tech report. However, this method was not chosen for further consideration as the County's next disposal method for two reasons: 1) Chlorine in MSW presents technical and economic challenges for the kilns burning MSW-based RDF, and 2) MSW-based RDF is a less desirable product than RDF made from a homogenous feedstock, such as C&D waste. This makes securing a buyer for MSW-based RDF very difficult.

Terms

Waste conversion technologies are nonincineration technologies that use thermal, chemical, or biological processes, sometimes combined with mechanical processes, to convert the unrecycled

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portion of MSW to electricity, fuels, and/or chemicals that can be used by industry. Gasification and pyrolysis are examples of waste conversion technologies.

Incineration is a disposal method that converts waste materials into ash, flue gas, and heat using controlled flame combustion.

Waste-to-energy technologies recover energy from MSW and include both waste conversion technologies and incineration with energy recovery, such as mass burn waste-to-energy, refuse-derived fuel, and advanced thermal recycling.

Systems are unique technological methods for processing specified feedstock that are developed and patented by companies.

Feedstock is the input material used by waste conversion and waste-to-energy technologies.

Long-Term Disposal Selection Process

The process to select the next Long-Term Disposal method began in advance of the 2019 Comp Plan with the reports *Conversion Technology Report*, the *Waste-to-Energy Study*, and an updated *Cedar Hills Site Development Alternatives Final Report* (R.W. Beck 2007, Normandeau 2017, and Herrera 2017). The information from these reports provided a basis for understanding the impacts of waste export and waste-to-energy (mass burn with waste export) that was used to structure the analysis of the *King County Long-Term Waste Disposal Options Study* (Tetra Tech 2025).

SWD worked with MSWAC and SWAC throughout 2021 to create the scope of the long-term waste disposal study, select the disposal options for analysis, and hone the criteria against which the disposal options would be measured. The consultants for the study, Tetra Tech, signed on to conduct the analysis in December 2022. The next year was spent researching the five disposal methods, modeling their impacts, and creating a comparative analysis to share with SWD and its advisory committees. In 2024, SWD created a series of meetings with a subgroup of MSWAC members to take a detailed look at the analysis results for the five disposal methods. The final Tetra Tech report was released in May 2025.

[Placeholder text: In order to make the most informed decision, a State Environmental Policy Act (SEPA) Supplemental Environmental Impact Statement (SEIS) was completed to analyze the environmental impacts of this Comp Plan, including the effects of waste export by rail (WEBR) and mass burn with WEBR. This publicly available SEIS was shared with SWD's interlocal agreement (ILA) partners and advisory committees to be considered in tandem with the Tetra Tech report.

After a series of discussions on the information between WEBR and mass burn with WEBR, MSWAC, SWAC, and interested regional Tribes provided letters of recommendation on their preferred disposal method(s). These letters, along with additional presentations and time for discussion, were provided to the King County Executive to supplement their decision-making process. Once the Executive finalized their Long-Term Disposal decision, it was included in this Comp Plan to be submitted and approved through the official Comp Plan adoption process.]

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Long-Term Waste Disposal Options Study Evaluation Criteria

In collaboration with its advisory committees, the division developed criteria by which disposal options were screened and evaluated in the Long-Term Waste Disposal Options Study. The screening and evaluation criteria fall into six categories, each with several sub-categories:

Environmental

- Cancer Potential
- Global Warming Potential
- Acidification Potential
- Nonrenewable Energy Demand
- Water Consumption
- Smog Potential
- Resource Conservation

Economic

- Capital Costs
- Operating and Disposal Costs
- Revenue
- Financial Risk
- Cost per Ton

Operating History

- Proven Performance
- Safety Record
- Environmental Compliance
- Regulatory Compliance

Logistics

- Operating Life of Facility
- Siting, Design, Permitting, and Construction Requirements
- Compatibility with Current Collection Systems

Social

- Environmental and Social Justice/Equity
- Local Traffic Impacts
- Local Job Creation

Capacity

- Capacity and Minimum Waste Requirements

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- Waste Type Composition and Acceptance
- Residual Waste Management

[Insert chart comparing key criteria results between Mass Burn and WEBR, including information from SEIS]

Next Steps

[This section will be written once the LTD Decision been made by the Executive with input from MSWAC and SWAC.]

Technologies for the Future

SWD will monitor established and emerging technologies, including gasification, pyrolysis, and refuse-derived fuel to determine whether they develop capacity to handle all or components of the county's waste stream in the future.

Numerous companies are forming, developing new methods, obtaining patents, and improving waste conversion technology systems. Many universities, consultants, and organizations are conducting studies and producing reports, and partnerships are forming to fund, build, and operate facilities. Meanwhile, jurisdictions are undertaking rule-making efforts to define terms and establish regulations that both facilitate the development of sustainable technologies and protect the environment and the public.

The division is committed to the continued exploration of these and other emerging technologies and is monitoring changing definitions, legislation and regulations, companies, and partnerships.

Restoration of Closed Landfills

The division is responsible for maintaining and monitoring closed landfills that were constructed under different standards than those that guide landfill development today. Depending on the year the landfill was closed, a minimum maintenance and monitoring post-closure period is specified in the Washington Administrative Code, but the timeline is not definite in state law. Although most of the closed landfills have reached the end of the required minimum post-closure period, regulations and the understanding of closure requirements have changed, requiring ongoing maintenance and monitoring, as well as financial assurances to fund these activities. Figure 6-1 shows the location of the closed landfills. Table 6-1 indicates the code regulating the closed landfills and the year of closure.

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Figure 6-1. Location of King County Closed Landfills

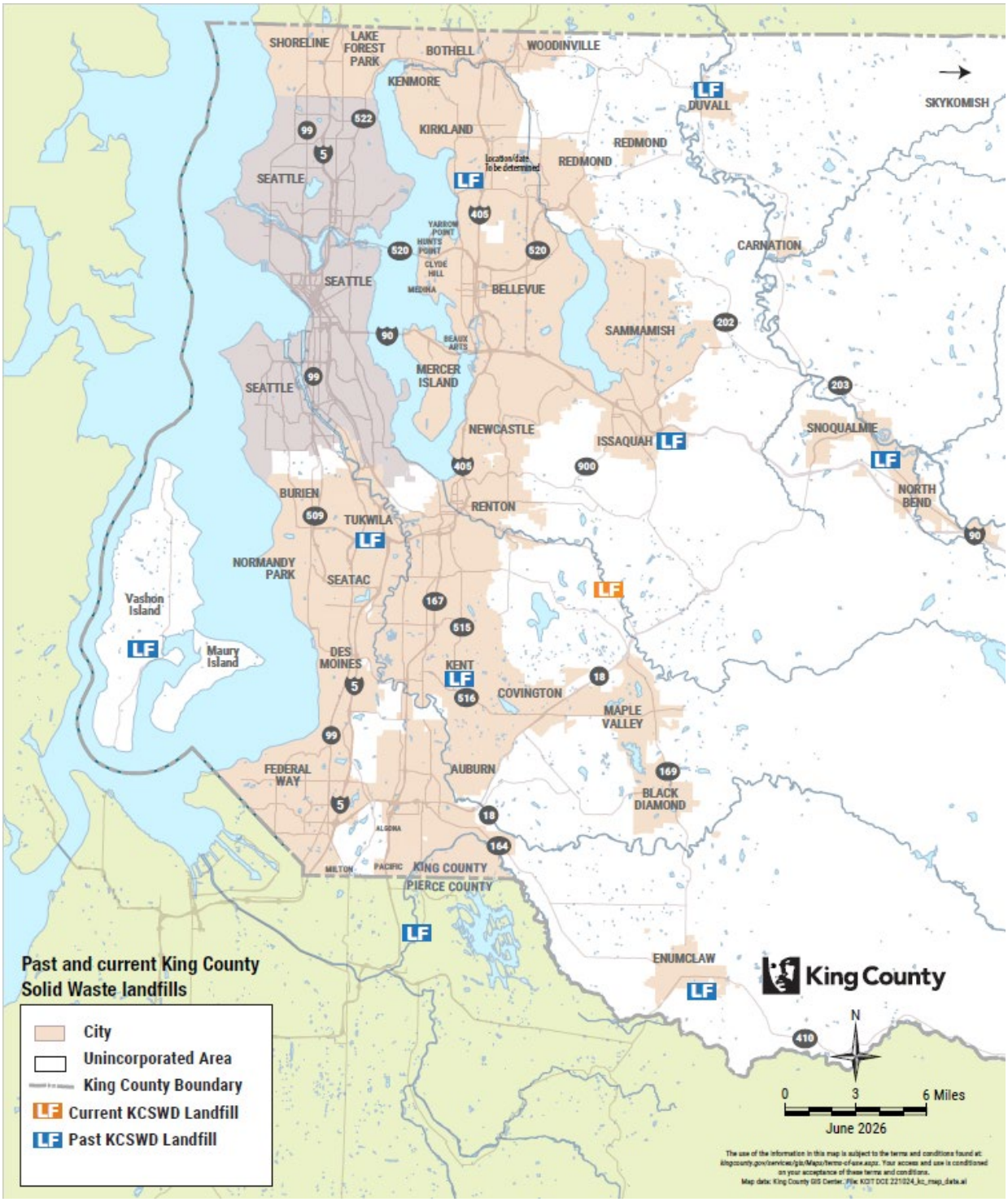

Table 6-1. Landfill Regulations and Year of Closure

LANDFILL	Regulation	Year Closed
Vashon Island	WAC 173-350, WAC 173-351	2001
Hobart	WAC 173-304	1994
Enumclaw	WAC 173-304	1993
Cedar Falls	WAC 173-304	1985
Duvall	Pre- WAC 173-301	1981
Houghton	Pre- WAC 173-301	1965
Puyallup/Kit Corner	Pre- WAC 173-301	Mid-1960s/1967

Post-Closure Monitoring and Maintenance

At seven of the nine closed landfills, the division routinely monitors groundwater, surface water, wastewater, and landfill gas. The Bow Lake and Corliss landfills were excavated to build new transfer stations on site, so very little, if any, waste remains and monitoring is no longer necessary. Studies are underway at the Vashon, Cedar Falls, Hobart, Enumclaw, Houghton, Duvall, and Puyallup/Kitts Corner landfills to determine what additional actions are needed for these landfills to reach a stable state or "functional stability." When a stable state has been reached, post-closure activities at these landfills may be reduced or terminated. A covenant is filed on the property to ensure institutional controls to prevent disturbing the landfill waste or restrictions on land use are followed.

Under the current monitoring program, sampling data are collected from more than 180 groundwater, surface water, and wastewater monitoring stations, and approximately 100 landfill gas monitoring stations. These data are summarized in quarterly and annual reports submitted to the Washington State Department of Ecology and Public Health. Public Health also routinely inspects all of the closed landfills.

As mentioned, the closed landfills were constructed under different standards than those that guide landfill development today. With the exception of portions of the Vashon landfill constructed after 1989, they are unlined and, in some cases, do not incorporate all of the environmental control systems present in a modern landfill. Thus, the unique characteristics of each site—in particular the underlying hydrogeology, what lies downstream, legacy residual contamination, and the waste that was originally placed in the landfill—play an important role in the post-closure needs of the site. These factors also influence the need for ongoing monitoring and maintenance of the existing landfill control systems. Since all but the Vashon closed landfill have reached the end of their required post-closure periods, each is being evaluated to determine what actions are required to bring the landfill to a stable state. In some

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cases, there may be no need to continue monitoring; at other sites, monitoring may continue at a reduced frequency and for a reduced range of constituents found in the medium being tested.

When the Cedar Hills landfill reaches capacity and closes, the bottom liner, capped top, and extensive gas, leachate, and water control systems will inhibit releases to the environment for many years. The Cedar Hills landfill has unlined refuse areas, and refuse placed in the buffer on the east side of the landfill will need the same type of extensive environmental investigations and cleanup actions used at Vashon. Applicable regulations will define the minimum post-closure period. Landfill closure is guided by the federal Resource Conservation and Recovery Act Title 40, Subtitle D, Part 258, Subpart F—Closure and Post-Closure Care, as well as Washington Administrative Code 173-351. The Model Toxics Control Act (WAC 173-340) is another regulatory pathway that may be explored for closure. The post-closure period may be shortened or lengthened based on the perceived risk to human health and the environment. After the post-closure period, there is expected to be some reduced level of periodic monitoring and care to ensure the integrity of the cap and other environmental controls.

Beneficial Reuse of Closed Landfill Properties

The County continues to examine possibilities for the beneficial reuse of closed landfill properties. While the presence of landfill control systems at these landfills may limit the types of beneficial reuse projects that can be implemented, the County has been successful in converting several properties wholly or in part to new purposes. Future beneficial uses also could create revenue opportunities.

Houghton closed landfill – Athletic fields were developed on the former Houghton landfill area.

Hobart closed landfill – Model airplane enthusiasts and an astronomy club use the open spaces of the Hobart landfill.

Duvall closed landfill – The county installed an 800-MHz radio tower outside of the refuse boundary of the Duvall landfill as part of its Emergency Communications Project.

Cedar Falls, Duvall, and Puyallup/Kitts Corner closed landfills – Walking and cycling trails in the property buffers are used by area communities.

This Comp Plan recommends developing increased community engagement around potential beneficial uses of closed landfills to support informed considerations of reuse concepts and site conditions. Engagement may be tailored to the scale and complexity of each site and may include sharing information, inviting input on potential uses, and identifying considerations that can help inform planning and decision-making.

Other Beneficial Uses

The open spaces at closed landfills, often grassy areas surrounded by woods, provide habitat for diverse species of plants and animals. Closed landfills that currently provide homes to healthy populations of wildlife are Cedar Hills, Duvall, Hobart, Houghton, Puyallup/Kitts Corner, and Vashon.

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Grass covers have been placed over all of the landfills, engineered to suit the naturally occurring features and areas of potential enhancement at the properties. The microbial activity in these soil covers, especially when bioberms are installed, destroys some of the methane being emitted by closed landfills. Vegetative covers at the Duvall and Puyallup/Kitts Corner properties include trees and other vegetation planted to improve ground cover and water quality, as well as perches and nesting boxes for hawks and owls. The Cedar Falls and Duvall landfills are near the headwaters of large streams and provide cover and a source of food for birds, deer, coyote, and other woodland animals. Managing these properties as green space helps support the County's goals and policies for habitat preservation and increases carbon sequestration (i.e., reduces the total carbon emissions) at the properties.

Finding reuse opportunities for the closed landfill properties provides continued benefit to the surrounding communities, but the uses need to be compatible with the ongoing environmental monitoring at the sites. The division continues to explore beneficial reuse options for closed landfills, such as alternative energy farms (solar and wind) and sustainable forestry.

Table 6-2. Possible Beneficial Uses for Closed Landfills

Opportunity	**Description**
Recreation	Recreational opportunities range from less intensive and publicly restricted uses (e.g., a nature preserve) to more intensive activities, such as a sports complex (e.g., athletic field, golf course). Recreational uses can be comprised of primarily open space or might include amenities such as restrooms, concession stands, or other structures and features.
Agriculture	Agricultural uses (e.g., crops, haying) can include planting shallow root crops, which might substitute for the vegetative layer of the closed landfill. Alternatively, a greenhouse can be used to grow crops that might require a more controlled environment.
Structural features and buildings	Parking lots, maintenance buildings, retail stores, and other structures have been constructed on closed landfills. Most structures built on former waste disposal sites are relatively light (i.e., restrooms, pavilions, solar panels), although some projects have heavier infrastructure (i.e., department stores, wind turbines). A landfill site can also serve as a hub for other sustainability-oriented purposes, including environmental

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	educational centers for the community, a location for recyclables, household hazardous wastes, and waste drop-off centers, and a center for donating and claiming used or unwanted items.
Energy generation	In addition to landfill gas-to-energy, solar or wind projects can potentially be implemented at closed landfills depending on several factors, such as geographic location and climate. Landfills that utilize these technologies to produce energy on-site can generate revenue and reduce greenhouse gas emissions by offsetting fossil fuel use.

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Chapter 7 – Solid Waste System Finance

Policies

F-1	Keep fees as low as reasonable, while covering the costs of effectively managing the system, protecting the environment, encouraging recycling, and providing service to customers.
F-2	The fee charged to customer classes will be the same at all facilities, unless the Metropolitan King County Council determines a change in the rate structure is necessary to maintain service levels, comply with regulations and permits, or to address needs of low-income customers.
F-3	Assess fees for use of the solid waste transfer and disposal system at the point of service.
F-4	Assess the fixed annual charge to billing agencies, charged out on a monthly basis.
F-5	The County General Fund will not charge use fees or receive other consideration from SWD for use of any transfer facility property in use, as of November 6, 2013. The division's use of assets acquired by other separate County funds is subject to use fees. If the division ceases to use a property, all proceeds from the sale or other use of such property are due to the owner of record.
F-6	Utilize the assets of the King County SWD consistent with the conditions established in the Amended and Restated Solid Waste Interlocal Agreement with the cities.
F-7	Use solid waste fees to find mitigation payments to cities for impacts directly attributable to solid waste facilities, per the Revised Code of Washington 36.58.080 and the Amended and Restated Solid Waste Interlocal Agreement.
F-8	Use solid waste fees to fund required mitigation for solid waste facilities, including mitigation mandated by federal, state, and local regulations and permits.
F-9	The Executive may establish an Environmental Reserve Fund with revenue from solid waste fees for the benefit of the signatories to the Amended and Restated Solid Waste Interlocal Agreement.

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F-10	Maintain the following solid waste funds: • Landfill Reserve • Landfill Post-Closure Maintenance • Capital Equipment Recovery Program • Construction Fund
F-11	Maintain reserve funds, routinely evaluate the funds for long-term adequacy, and set contributions to maintain reasonable rate stability.
F-12	Include a "Rainy Day" Reserve in SWD's financial plan that is equal to at least 30 days of operating expenses.
F-13	Include a Recession Reserve to mitigate the risks associated with a moderate-level economic recession.
F-14	Include a Rate Stabilization Reserve to smooth increases between changes in the rate.
F-15	Maintain the Landfill Post-Closure Maintenance Fund at a level to ensure that environmental monitoring and maintenance of the closed landfill will be fully funded through the end of their regulated post-closure maintenance periods, as defined by applicable law.
F-16	Finance capital projects using an appropriate combination of cash and debt depending upon the life of the asset, financial benefits such as rate stability, and interest rates.
F-17	Maintain a SWD financial forecast and cash-flow projection of 10 years or more.

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Summary of Recommended Actions

The following table includes a menu of recommended actions that the County and the cities should implement. Under the responsibility column, the entity listed first has primary responsibility for the action and a star (*) indicates that the action is a priority.

Action Number and Responsibility	Action	Detailed Discussion
1-f County	Continue to evaluate and implement fiscally responsible operational changes to support a sustainable business model and maintain the assets of the solid waste facilities.	Page #-#
2-f County	Consider alternatives to the current rate methodology.	Page #-#
3-f County	Study the cost of providing services to self-haul customers, and to other customer classes, if needed.	Page #-#
4-f County	Establish a low-income customer discount consistent with RCW 81.77.195.	Page #-#
5-f County	Continue to explore new revenue sources to help finance the solid waste system.	Page #-#
6-f County	Develop the procedures to establish and maintain the Rate Stabilization Reserve.	Page #-#

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Solid Waste System Finance

Financial policies help guide the solid waste system's operations and investments. This chapter first provides a brief summary of the division's financial structure, including descriptions of funding sources, revenues, and expenditures. The remainder of the chapter describes a range of influences expected to have a financial impact on the division in the future.

Financial Policy Framework

Many of the financial policies the SWD adheres to are from sources outside of the division, including, but not limited to:

- Interlocal Agreements with cities.[43] These agreements include information about paying rent on the Cedar Hills Regional Landfill, city mitigation payments, and creating the Environmental Reserve Fund.
- King County Comprehensive Financial Management Policies maintained by the Executive Office.[44] This includes information on setting budgets, how to finance capital projects, and maintaining financial reserves, such as the Rainy Day and Rate Stabilization Reserves.
- King County Code Title 10.[45] This includes information about various fees such as the low-income discount, unsecured load fee, recycling fees collected in unincorporated areas, and fees charged at transfer stations.
- SWD issues bonds through General Obligation bonds backed by the County. This is managed by the Finance and Business Operations Division and Bond Council.
- Various Washington state laws and codes also direct the division in financial matters, including how much money to set aside in a reserve fund for post-closure care at landfills.

The division has a few internal financial policies, as well. Many of the financial reserves (Recession Reserve, Rolling Stock Reserve, etc.) loosely fall under the umbrella of Expenditure Reserves described in the Comprehensive Financial Management Policies, and the details of these reserves are explained in financial plans. Other areas such as how much to assume in rate setting for capital accomplishment rates or how much debt to use to finance projects are discussed during rate-setting processes.

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[43] https://kingcounty.gov/en/dept/dnrp/waste-services/garbage-recycling-compost/solid-waste-planning-monitoring/interlocal-agreements

[44] https://www.kingcounty.gov/~/media/independent/forecasting/documents/5_-_Comprehensive_Financial_Management_Policies_2016_Update.ashx?la=en

[45] https://aqua.kingcounty.gov/council/clerk/code/13_Title_10.htm

Funding Solid Waste Services and Programs

King County's solid waste transfer and disposal system is a public-sector operation that is funded almost entirely by fees collected from its customers. The division is an enterprise fund, managing nearly all of its expenses with revenues earned through these fees.

The fees charged at County facilities, called tipping fees, and the fixed annual charge (FAC) assessed to haulers and partner cities (whichever entity bills curbside customers), pay for the operation and maintenance of transfer and disposal facilities and equipment, education and promotion related to waste prevention and recycling, grants to cities to support waste prevention and recycling efforts, and administrative operating expenses and overhead.

Tipping fees and the FAC also pay for the construction of transfer facilities. Bonds or loans may be used for large projects, but repayment of this debt is funded by these fees.

As discussed later in this chapter, through transfers into reserve funds, the fee paid for each ton of waste entering the system today covers the expenses involved in disposal of that waste, even if some costs are incurred decades in the future. Using this financial structure ensures that the full cost of solid waste handling is paid by the users of the system.

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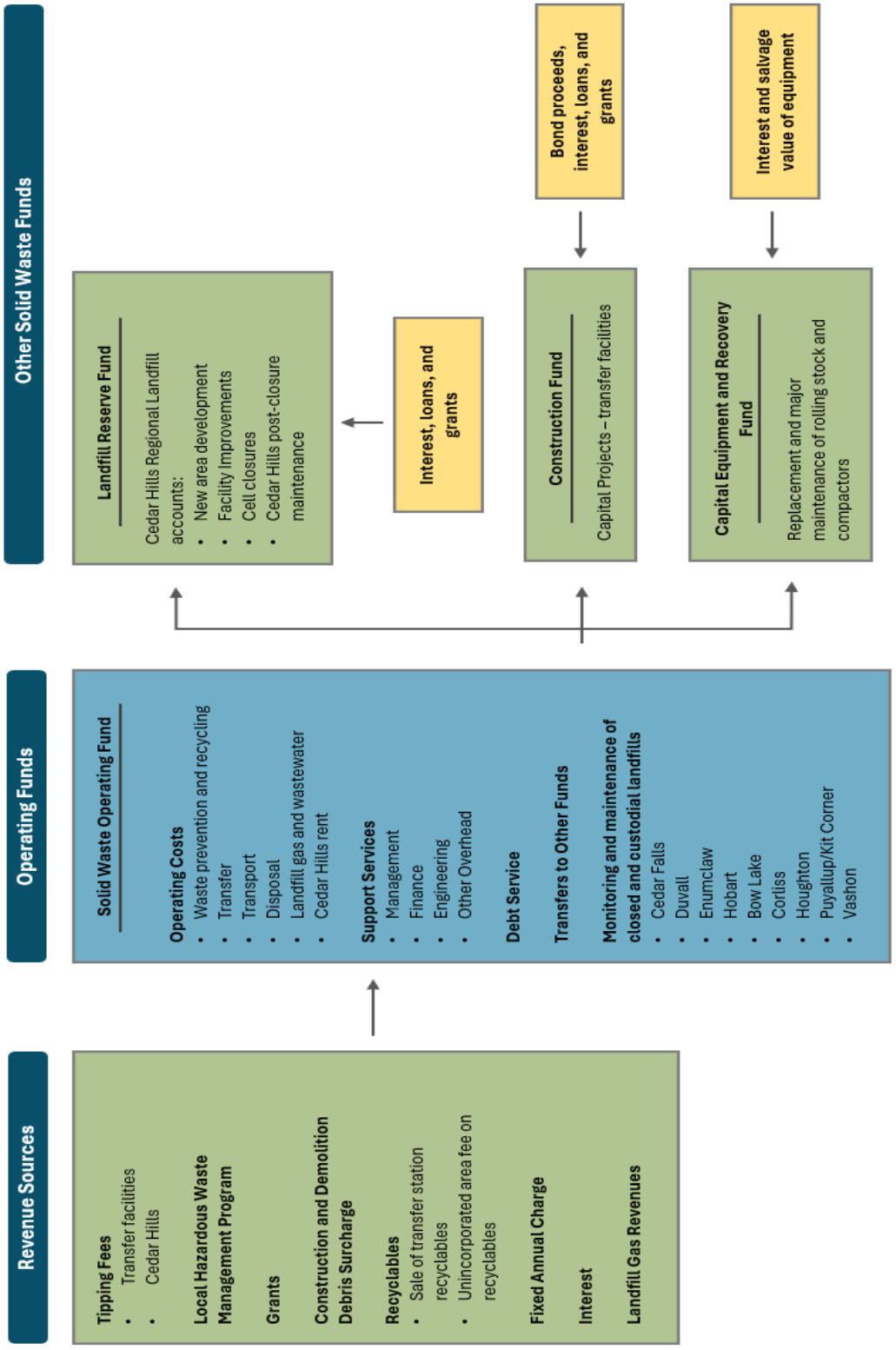
The fund structure is illustrated in Figure 7-1 and discussed in the following sections.

Figure 7-1. Solid Waste Division Fund Structure



How Cities Fund Solid Waste Programs

Cities fund their solid waste and waste prevention and recycling programs in a variety of ways, and the resources available to the 37 cities in the King County system vary widely. Some cities receive revenue from fees paid for solid waste collection services. These fees may be paid directly to the city or to the collection company, depending on who provides the collection service—the city itself or a contract collection company—and what contractual arrangements have been made.

In some cases, the collection companies charge a fee that is passed on to the city to fund their programs. Some cities also charge a utility tax. Another funding source for cities is state and county grants (see Chapter 4, *The Circular Economy* for more information on grants). For cities that do not receive any revenue from collection, the only revenue sources for funding waste prevention and recycling programs may be grants and the city's general fund.

Solid Waste Division Revenues

As mentioned earlier, the solid waste system is funded primarily by the tipping fees charged at division facilities and the FAC. The tipping fee is charged to the commercial collection companies that collect materials curbside and to residential and business self-haulers who bring wastes to the transfer facilities themselves. In accordance with KCC 10.08.040, the County Council establishes the fees charged at county solid waste facilities.

There are six main types of tipping fees:

Commercial (Contract) Hauler Fee – The per-ton fee charged to contract haulers with city/town contracts (this does not include certain waste haulers such as 1-800-GOT-JUNK) disposing of municipal solid waste (MSW) at transfer facilities and at the Cedar Hills landfill.

Fixed Annual Charge (FAC) – A fixed charge to contract haulers as part of the rate restructure. It is a fixed amount divided among cities and unincorporated areas in the system, based on the percent of total contract hauler tons each area contributed during the most recent full-calendar year. This fee is charged in equal amounts monthly and prorated as needed when city/town contracts change haulers.

Self-Haul Customer Fees – The per-ton fee charged to customers disposing of MSW at transfer facilities. This fee also includes a mandatory minimum fee for self-haul customers based on a prorated cost for 320 pounds of MSW.

Regional Direct Fee – A discounted fee charged to commercial collection companies that haul solid waste residuals to Cedar Hills in transfer trailers from their own processing facilities, thus bypassing County transfer stations.

- In 2024, the division entered into an agreement with the Seattle Public Utilities (SPU). The agreement pertains to residuals (unrecyclable materials) from recycling collected in the King County service area but processed at facilities inside Seattle. The agreement stipulates that

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residuals would be disposed of by SPU and that SPU would pay the division a reduced price for each ton.

Yard Waste and Clean Wood Fee – A fee for separated yard waste and clean wood delivered to facilities that have separate collection areas for these materials.

Special Waste Fee – The fee charged for certain materials that require special handling, record keeping, or both, such as asbestos-containing materials and contaminated soil. There are two different special waste fees that reflect the greater or lesser expenses involved in handling and tracking different materials.

Other fees are charged for some recyclables, such as appliances or mattresses. KCC 10.12.021.G authorizes the division director to set fees for recyclable materials for which no fee has yet been established by ordinance. These fees may be set to encourage recycling and need not recover the full cost of handling and processing. In accordance with state law (RCW 70.93.097), the division also charges a fee to customers with unsecured loads arriving at any staffed King County transfer facility or the Cedar Hills landfill.

Figure 7-2 shows the breakdown of revenues, as projected for 2026-2027. As shown, about 84% of the division's revenue comes from tipping fees. The remainder of the division's revenue comes from a few additional sources. The most significant of those is the revenue from the Cedar Hills Renewable Gas to Energy (CHRGE) facility. Other sources of revenue include local hazardous waste management program fees; income from leasing space at some of the division's facilities; recyclables revenue, including revenue from both the sale of scrap metals received at division transfer facilities and from a fee on recyclables collected in unincorporated areas; fees collected from C&D disposal; fees collected on unincorporated area curbside accounts to support waste prevention and recycling education; interest earned on fund balances; and Washington State Department of Ecology grants to help clean up litter and illegal dumping throughout the county, as well as to support waste prevention and recycling. Based on economic and market conditions, revenues from these sources and interest earned can vary considerably.

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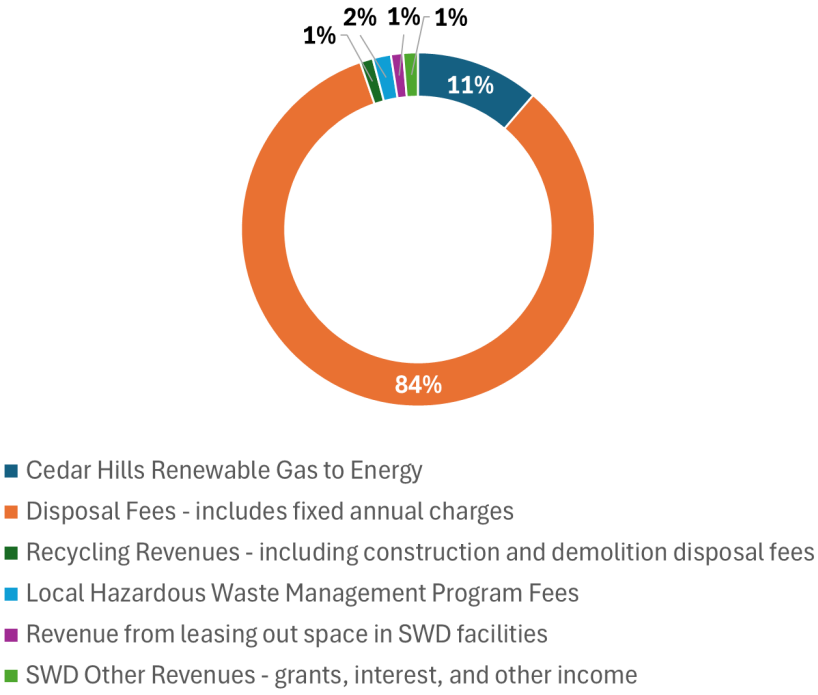
Figure 7-2. 2026-2027 Budgeted Revenue



Construction and Demolition Waste Fee

The King County construction and demolition (C&D) waste program is self-funded through a fee applied to all C&D materials deposited in a landfill. The County collects this fee directly from its designated C&D waste transfer facilities, C&D materials recovery facilities (MRFs), and from intermodal rail yards accepting direct-to-landfill loads from large projects, which have been approved for direct disposal by King County.

These C&D fees are based on the percentage of the tons of C&D waste collected from job sites within King County's jurisdiction (not Seattle and Milton) compared to the overall total tons of C&D waste, regardless of jurisdiction, disposed at a landfill, per Section 13 of the Designated Facility Agreement. Because this fee is only imposed on the tons of waste disposed at a landfill, and does not apply to any materials recycled, it should not be added as an upfront fee to all tons of mixed C&D received.

The C&D fee is used to cover SWD's costs to manage and oversee the division's C&D recycling and disposal program, including, but not limited to, the permittee's performance under this agreement. This system is designed to encourage recycling of C&D materials. (For more information, see Chapter 4, *The Circular Economy.*)

The C&D fee, first set in 1993 was increased, for the first time, in 2024 to more adequately fund this program.

Solid Waste Division Expenditures

Division expenditures can be divided into four broad categories: operating costs (excluding reserve funds), support service costs, debt service, and transfers to other solid waste funds. More information on these is provided below. The division also maintains three target fund balance pools or reserves:

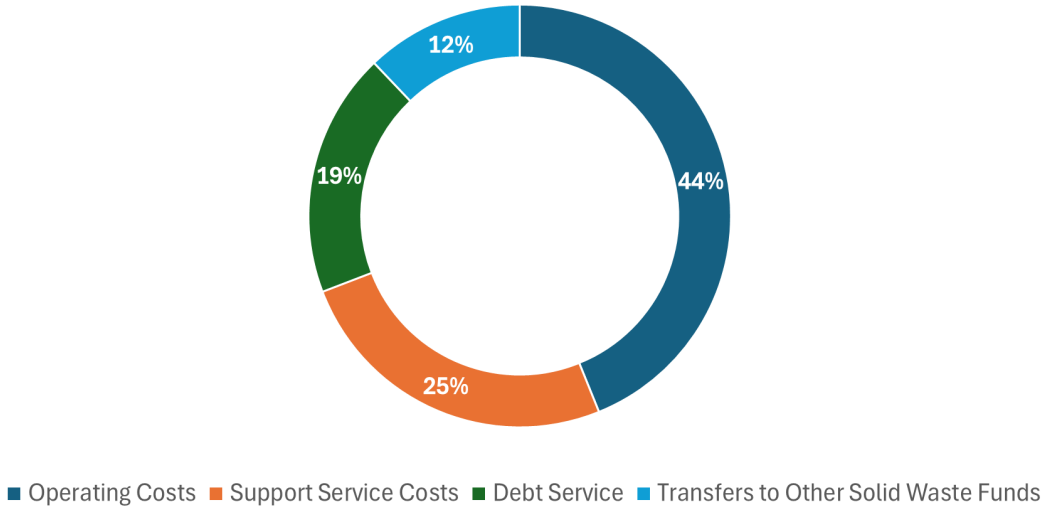
Rainy-Day Reserve – An average balance in the Operating Fund sufficient to cover 30 days of direct operating expenses.

Recession Reserve – Set at 5% of projected annual revenues to dampen the impact of decreased tonnage revenues caused by short-term impacts of a recession.

Rate Stabilization Reserve – A reserve amount created to smooth forecasted rate increases over a six-year period.

Figure 7-3 uses 2026-2027 projections to illustrate the various division expenditures, which are described in the following sections:

Figure 7-3. 2026-2027 Budgeted Expenditures



Operating Costs

Operating costs, which constitute the largest portion of division spending, include the day-to-day expenses for transfer, transport, and landfill operations, maintenance of equipment and facilities, and management of landfill gas and wastewater. In addition, all but one of the closed landfills have met the obligatory number of years of post-closure care but have ongoing needs for monitoring and maintenance. Since the post-closure period has expired and maintenance and monitoring are still required, those projects are now funded by the Operating Fund.

Also included in the operating costs category is the rent that the division pays to the county's General Fund for use of the landfill property. Rent is based on a fair market property appraisal. An appraisal by Integra Realty Resources in 2025 determined a rent payment schedule for 2026 through 2040. Also included in operation costs are mitigation paid to cities for impacts directly attributable to solid waste facilities (RCW 36.58.080) as well as other mitigation related to construction or other activities, as required by federal, state, and local regulations and permits. Similar to the cities' authorization to receive mitigation, and due to the longer life of the landfill, the Road Services Division of the Department of Local Services will study the ability to charge SWD to mitigate impacts directly attributable to the landfill, including wear and tear on nearby roads.

Another expense in this category is recycling costs. This includes funding for the Re+ suite of programs, grants to the cities, and other waste prevention and recycling programs and services provided by the division.

Support Service Costs

This cost category includes functions that support operations, such as engineering, overhead, finance, administration, and planning.

Debt Service

Debt service is the payment of interest and principal on bonds and loans. Major transfer facility capital projects are generally financed by a combination of general obligation (GO) bonds backed by the full faith and credit of the County's General Fund and rate dollars in the Construction Fund. With approval of the County Council, GO bonds have been and are being issued for transfer facilities and other capital projects. Repayment of the debt will not extend beyond, and may be less than, the useful life of the facility. Additional factors that may be considered include, but are not limited to, changes in disposal method, length of the interlocal agreement (ILA), bond market/bond rates, and waste generation.

Cedar Hills landfill capital projects for new area development and facility improvements are funded through debt financing, but closure costs are still funded with cash through the Landfill Reserve Fund discussed later in this section.

Transfers to Other Solid Waste Funds

Transfers from the Operating Fund to Reserve Funds make up a portion of the division's costs. These reserve funds were established to ensure that the division can meet future obligations, or expenses, some of which are mandated by law. Contributions to reserve funds are routinely evaluated to ensure they are adequate to meet short- and long-term needs. Paying into reserve funds stabilizes the impact on rates for certain expenses by spreading the costs over a longer time period and ensures that customers who use the system pay the entire cost of disposal. The three reserve funds—the Capital Equipment Recovery Program Fund, the Landfill Reserve Fund, and the Post-Closure Maintenance Fund—are discussed below.

Bond proceeds and contributions from the Operating Fund to the Construction Fund and Landfill Reserve Fund are used to finance new construction and major maintenance of division transfer facilities, some closed landfill mitigation projects, and new area development at the landfill. Contributions from

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the Operating Fund to the Construction Fund result in less borrowing and, consequently, a lower level of debt service.

The Capital Equipment Recovery Program Fund (CERP) is codified in KCC 4A.200.680. The purpose of the CERP is to provide adequate resources for replacement and major maintenance of solid waste rolling stock (primarily long-haul trucks and trailers), landfill machinery, and stationary compactors. New equipment is purchased from the Operating Fund but, after the initial purchase, replacements are funded through the CERP.

By accumulating funds in the CERP, the division smooths out the expense of replacing needed equipment without causing major fluctuations in rates, even while revenue fluctuates. Annual contributions to the CERP are calculated by projecting future replacement costs, salvage values, and equipment life. Contributions are adjusted to reflect changes in facilities and operations that affect equipment needs. The contributions are held in an interest-bearing account until needed. There is a Rolling Stock Reserve in the CERP fund that protects the fund against unanticipated asset retirements and is set at 10% of replacement value of rolling stock in the program.

The Landfill Reserve Fund (LRF), codified in KCC 4A.200.390, covers the costs of four major accounts maintained for the Cedar Hills landfill:

- **New area development account** – Covers the costs for planning, designing, permitting, and building new disposal areas at the landfill.
- **Facility improvements account** – Covers a wide range of capital investments required to sustain the infrastructure and operations at the landfill, such as enhancements to the landfill gas and wastewater systems.
- **Closure account** – Covers the cost of closing operating areas within the landfill that have reached capacity. Mandated by federal and state law, these contributions help the division prepare incrementally for the cost of final closure of the entire landfill.
- **Post-closure maintenance account** – Accumulates funds to pay for post-closure maintenance for Cedar Hills until it reaches functional stability, estimated to occur about 40 years after closure. This account is also mandated by federal and state law.

The sum of all four accounts, based on projected cost obligations, makes up the LRF contribution from the Operating Fund. Projected cost obligations are based on the current plan for the landfill. When Cedar Hills closes, the division will discontinue its contributions to the LRF. After final closure, the balance of the LRF will be transferred to the post-closure maintenance fund to pay for Cedar Hills' post-closure maintenance and monitoring.

The post-closure maintenance fund is a separate fund that pays for the maintenance and environmental monitoring of closed and custodial landfills throughout King County (see Chapter 6, *Landfill Management and Solid Waste Disposal*).

In addition to the funds mentioned above, the division established an Environmental Reserve, as discussed in the Amended and Restated Solid Waste ILA. The purpose of this fund is to help pay for any environmental liabilities not already covered by system rates or insurance. The fund will be retained for a minimum of 40 years following the closure of the Cedar Hills landfill.

Rainy Day Fund Balance

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The division's current practice is to retain an average balance in the operating fund sufficient to cover at least 30 days of direct operating costs.

Recession Reserve

FCS Group conducted a rate structure analysis and reported that the division suffered an 11% reduction in basic fee revenue over a two-year period during the Great Recession (FCS Group 2017), which started in late 2007 and lasted through mid-2009. For comparison, during the more moderate 2001 "Dot-Com Bust," basic fee revenue decreased by 4% in that two-year period.

To mitigate the risks associated with a moderate-level economic recession, holding 5% of annual revenues as a minimum rate stabilization reserve balance would provide for a recession slightly more severe than the Dot-Com Bust, but not for an outlier like the Great Recession.

Preparing for two years of reduced revenues fits with the County's two-year budgeting cycle. Presumably, the Council would be able to pass any needed recession response measures within two years, and the division would not need to carry excessive reserves. In years of recession, this fund is intended to be drawn down by no more than 50% per year. After a recession has ended, the fund is gradually refilled over a five-year period.

Rate Stabilization Reserve

Beyond the target fund balance and recession reserve, the division maintains a rate stabilization reserve. This reserve allows ending fund balances to be carried over between biennia, which, when utilized, can help smooth revenue demands over time. This creates a more predictable path for rate payers. For example, when a department spends less than it collects in a given year, it can carry that savings over into future years through the rate stabilization reserve. This reserve can be used to cover costs in future years, thus reducing the impact of cost increases, and help keep rates from spiking one year to the next.

Influences on Future Costs and Revenue

In addition to the unanticipated increases or reductions in tonnage due to the economy, other factors can be expected to influence costs and revenues. These factors, which can be projected and budgeted for with varying degrees of certainty, are summarized below.

Interest Earnings

The division's reserve funds are invested to earn interest during the years, or even decades, before the funds are needed. This is particularly significant for the long-term LRF, which will finance landfill closure and 40 years of post-closure care after Cedar Hills reaches its maximum disposal capacity, making interest earnings a considerable factor in the amount that needs to be put aside.

Waste Prevention and Recycling

As discussed earlier, revenues from garbage tipping fees cover the costs of waste prevention and recycling services and programs. This financing structure requires the division to estimate the effects of waste prevention and recycling on garbage disposal to reasonably project future revenues.

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While the revenue stream relies primarily on garbage tipping fees and the FAC, two current priorities in solid waste management are waste prevention and recycling, which contribute to reductions in the amount of solid waste disposed of and therefore in revenues received. The reduction in the amount of waste received due to waste prevention, recycling, and product stewardship has been gradual, and the system has adjusted to lower revenues. Further reductions through increasingly rigorous waste prevention and recycling efforts, like Re+, will continue to affect the revenues of King County and other jurisdictions across the state. The state's *Moving Washington Beyond Waste and Toxics, 2021 Update* recognizes that, "Local governments, in particular, are concerned about how to sustain funding for solid waste infrastructure and programs when the goal is to reduce waste disposal—the source of significant funding" (Cascadia 2021). The County completed a *Sustainable Solid Waste Management Study* (KCSWD 2014) that looked at multiple strategies, technologies, and services that the division could employ to increase recycling and manage solid waste. One of the strategies suggested by the study is to develop a sustainable financing model that is aligned with waste prevention and recycling (KCSWD 2014), which the division has begun doing with the introduction of the FAC in its 2024 rate restructure.

Increased waste prevention and recycling efforts have had positive influences on the financial aspects of the system as well. As discussed in Chapters 4 and 6, waste prevention and recycling have contributed to extending the life of the Cedar Hills landfill, which will save money for ratepayers. Another aspect of waste prevention and recycling that has had a positive financial effect is product stewardship. Extended Producer Responsibility shifts the management of materials at the end of their life to the product manufacturer. This shift reduces the costs to cities and counties of managing products such as televisions, computers, and fluorescent bulbs and tubes, to name a few. The savings are most substantial for products that contain hazardous materials and are more difficult and expensive to manage within the public collection, transfer, and disposal system.

With the passage of the Recycling Reform Act (RRA) in early 2025, the division anticipates an impact on revenue. The County expects an overall loss in annual revenue of about $3.7 million on an ongoing basis due to reductions in tonnage going to the landfill in 2032 and beyond as a result of the RRA. At the same time, the division also estimates a reimbursement of about $750,000 annually for providing recycling at transfer stations and education and outreach. It is also possible the division may see some minor savings in operating costs due to reduced tonnage

Operational Efficiencies

The division continually seeks to eliminate inefficiencies and variability in its operations. This commitment ensures the division's ability to provide value to its customers, while improving the quality of service, controlling costs, and upholding the County's environmental goals.

Examples of operational efficiencies that are producing significant and long-term results are discussed briefly below.

Landfill Tippers

The division uses tippers to empty garbage from transfer trailers at the landfill. The tippers replaced the use of older walking-floor trailers (see Chapter 6, *Landfill Management and Solid Waste Disposal* for more details). Tippers save staff time and other resources and reduce equipment and tire damage.

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Solid Waste and Cardboard Compactors

As discussed in Chapter 5, the transfer system in King County is undergoing major renovations to update station technology, improve efficiencies, and enhance environmental sustainability. The installation of solid waste compactors is one important component of that plan. The Bow Lake, Enumclaw, Shoreline, Factoria, and Vashon stations currently have waste compactors. All newly constructed recycling and transfer stations will incorporate compactors as well.

Compacting solid waste at the stations reduces the number of trips necessary to transport the waste by up to 30%. Fewer trips translate directly into lower costs for fuel, equipment, and staff. For instance, in the first six months of operation at the Bow Lake Recycling and Transfer Station, the use of a compactor saved almost 900 trips and over 8,400 gallons of diesel fuel.

In addition to solid waste compactors, the division is installing cardboard compactors at many of the stations. These compactors will allow the division to reduce the number of trips needed to pick up the bales.

Changes in the Fee Structure and Rates

Between 2020 and 2022, the division convened a rate restructure task force and hired a consultant to examine potential changes to the solid waste fees and propose a new structure. In 2022, the Council adopted a new rate structure, which went into effect in January 2024. The new structure reduced the basic fee paid by commercial haulers, a variable revenue source, and added a new fee called the fixed annual charge (FAC), a fixed revenue source. Since its inception, the amount of the FAC has been based on the division's cost to provide services that are not directly related to disposal (e.g. Re+ work, regulatory compliance, regional planning, etc.). This new structure had to meet several key criteria:

1. *Improve Rate Stability:* In order to preserve services and avoid large rate increases due to tonnage declines for consumers, a key objective is to stabilize rates. Because about 90% of solid waste revenue came from the basic fee on landfill-bound waste, when tonnage declined, revenues declined. This dynamic put the existing rate structure at odds with the County's zero waste of resources goal.
2. *Revenue Neutrality:* The restructure had to generate the same amount of revenue that would be collected under the status quo rate structure, thereby avoiding reduction in services. The new structure currently only targets a subset of solid waste revenues and does not, by itself, avoid reductions in service, but it does render them less necessary as tonnage drops.
3. *Maintaining Intraclass Cost Equity:* This means customers within the same class of service face uniformly applied charges (e.g., a utility cannot arbitrarily charge a higher or lower rate for customers within the same class).
4. *Preserving Intercity Cost Equity:* Intercity cost equity means avoiding shifts in disposal costs between cities. Avoiding these shifts was a key concern for members of the Task Force and the Municipal Solid Waste Advisory Committee (MSWAC).
5. *Incentives:* The County sought to preserve the incentives that cities and their residents/businesses have to reduce waste and recycle or compost more, as this helps the County meet its waste reduction goals.

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As it did with the 2022 rate restructure, the division has worked, and will work, with partners through its two solid waste advisory committees, the MSWAC and the Solid Waste Advisory Committee (SWAC), whenever it proposes rate increases or rate structure changes (e.g. changing the basis of the FAC from non-disposal costs to some other basis). This typically takes the form of presentations and discussion with committee members. In the case of the 2022 rate restructure, this included the formation of a special task force to discuss and gather feedback from interested parties.

In addition to rate restructurings, each time the division develops a rate proposal it has historically presented the advisory committees with several iterations of possible rate paths as SWD refines the rate proposal. These rate paths have shown both the proposed rate period to be included in the final rate proposal (usually the next biennium) as well as the next two biennia for a total of a six-year projection (even though the final two biennia are not part of the actual rates being proposed). As a result of recommendations by the auditors, the division will increase that time horizon from six years to 10 years and provide high and low projections for where rates go, depending on changes to key assumptions around the tonnage forecast and the CIP portfolio.

In 2018, Council approved a low-income discount program, called CleanUp LIFT (King County 2018). For low-income self-haul customers (individuals only, not businesses), the CleanUp LIFT program offers a discount on their transaction if they can provide an Orca LIFT, Electronic Benefits Transfer card (EBT), or Medicaid card. This discount is set up to be approximately half of the self-haul minimum fee and is raised along with the self-haul fee to maintain that ratio.

In 2010, legislation was passed authorizing the Washington Utilities and Transportation Commission to approve discounts for low-income curbside collection customers under certain circumstances. The division is working with the County's Information Technology Department and Public Health–Seattle & King County to develop and implement a low-income discount for residents in unincorporated King County. The division would be responsible for determining household eligibility for this "Curbside LIFT" program and coordinating with the haulers to ensure discounts are applied to eligible accounts. Launch of the program is planned for 2025.

Closure of the Cedar Hills Regional Landfill

Before Cedar Hills reaches capacity and closes, the division will need to have a new disposal option ready to accept waste. As a result of the new disposal method, the division's solid waste tipping fee is expected to increase to cover the cost of using an alternate means of disposal. Whether it is export to an out-of-county landfill, disposal at a waste- to-energy facility, or other conversion technology, past studies, as well as a recent preliminary study, indicate that the cost for disposal after Cedar Hills closes will be higher (KCSWD 2017c) (see Chapter 6, *Landfill Management and Solid Waste Disposal* for further discussion).

Other Revenue Sources

The division is continually exploring new sources of revenue to help offset reductions in tonnage. In addition to specific strategies discussed below, division staff regularly look for new grant and other funding opportunities from state and federal sources. Some sources of income could include lease agreements for the use of underutilized properties owned by the division, environmental benefit credits from new construction, or revenues from public-private partnership agreements on newer facilities

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geared at waste reduction. Cities may also want to consider additional funding sources to support their solid waste and waste prevention and recycling programs.

Sales from the Landfill Gas-to-Energy Facility

An example of the successful development of a revenue source is the sale of landfill gas from the Cedar Hills Renewable Gas to Energy (CHRGE) facility. In 2009, a landfill gas-to-energy facility opened its full operations at Cedar Hills, and the division began to receive revenues from the sale of landfill gas. The facility, which was purchased by the division in 2025 from Bio Energy Washington, converts methane collected from the landfill into pipeline-quality natural gas, which it sells to Puget Sound Energy.

In addition, the environmental attributes from the pipeline quality gas produced by the landfill gas-to-energy facility at Cedar Hills have value in the market and offer another ongoing source of revenue. In January 2011, the County Council unanimously approved an ordinance authorizing the division to enter into a contract to sell the environmental attributes associated with the landfill gas-to-energy project to Puget Sound Energy. This contract is structured so that the County shares in profits that Puget Sound Energy gets when selling the environmental attributes associated with the gas. The division receives revenue for both the gas and the environmental attributes associated with the gas. The revenue received by the division is highly volatile, and has ranged from $1 million to $7 million per year, depending on production rates and the market price.

Resource Recovery at Transfer Stations

Significant amounts of recyclable materials—notably wood, metal and cardboard—are disposed of at the transfer stations. The division has implemented diversion practices, such as sorting the recyclable materials on the tipping floor and banning certain materials from disposal, to recover more of these materials at the transfer stations. Revenues from the sale of these materials help offset the costs of sorting and equipment (see Chapter 5, *Solid Waste Transfer and Processing System* for further discussion).

Fees from Materials Collected at the Transfer Stations

King County Code (KCC 1 0.12.021.G) does not require that fees for recyclables recover the full costs of handling and processing recyclable materials, so the fees can be set lower to encourage recycling over disposal. In fact, for materials such as the standard curbside recyclables collected at the transfer stations, there is currently no fee at all, even though the division pays the cost of transport and processing. As collection services for more recyclable materials are added at transfer facilities and more tons of materials are recycled, fees will be evaluated on a regular basis and adjusted as necessary to optimize the financial and environmental benefits.

The division will continue to explore innovative opportunities, such as partnering with the private sector or other public agencies, to earn additional revenues and achieve savings through operational efficiencies. While these efforts may involve relatively small amounts of money, they cumulatively contribute to stabilizing rates for solid waste customers.

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[Placeholder: Final SEIS for the 202X King County Comprehensive Solid Waste Management Plan]

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Appendices

[Appendices will be included before the Plan is submitted for adoption]

A: UTC Cost Assessment

B: Six Year Capital Improvement Program

C: Amended and Restated Solid Waste Interlocal Agreement

D: SEPA Public Comments

E: Agency Plan Review Letters

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