



King County

Metropolitan King County Council

STAFF REPORT

Agenda Item:	7	Name:	Terra Rose Jenny Ngo Wendy K. Soo Hoo
Proposed No.:	2018-0375.2	Date:	March 20, 2019

SUBJECT

Proposed Ordinance 2018-0375.2 would approve and adopt the 2019 Comprehensive Solid Waste Management Plan, as amended by the Regional Policy Committee, as a revision of the 2001 Comprehensive Solid Waste Management Plan.

SUMMARY

Proposed Ordinance 2018-0375.2 would approve and adopt the 2019 Comprehensive Solid Waste Management Plan (CSWMP), thereby revising the 2001 Comprehensive Solid Waste Management Plan. The 2019 CSWMP sets the strategies for managing solid waste in King County for the next six-year planning period, with consideration of the next 20 years and includes policies and recommended actions related to: broad solid waste system priorities, solid waste forecasting and data, waste prevention and recycling, solid waste transfer and processing, solid waste disposal, and system finance. A full list of the policies, goals, and recommended actions in the transmitted Plan is provided in Attachment 6 to the staff report.

The staff report describes the CSWMP’s consistency with adopted policy and plans, discusses environmental sustainability impacts and the fiscal implications of the policies and recommended actions, and highlights additional policy issues for consideration.

Key issues that have historically been of interest to regional policy makers and that are addressed in the CSWMP include transfer network planning in Northeast King County, recycling and waste prevention strategies in light of the County’s adopted recycling goals and the ongoing uncertainty related to international recyclables markets, and plans for long-term disposal.

The staff report also describes actions taken by the Council in the 2019-2020 Biennial Budget Ordinance pertaining to Solid Waste.¹ The plan was amended and passed out of the Regional Policy Committee on February 27, 2019. The plan was amended in the Regional Policy Committee to remove from the body of the ordinance financial policies contained in Recommended Action 1-f and to attach an updated Plan (dated September

¹ Ordinance 18835

12, 2018) that references a 2000 settlement agreement, makes clarifications and corrections, and adds an appendix.

BACKGROUND

Comprehensive Solid Waste Management Plan

The Comprehensive Solid Waste Management Plan (referred to in this staff report as the CSWMP or transmitted Plan) is a policy guidance document that sets the strategies for managing solid waste in King County for the next six-year planning period, with consideration of the next 20 years. Both King County Code² and state law³ require the County to develop and periodically update a CSWMP in cooperation with the cities that have signed interlocal agreements for solid waste services.

The CSWMP is required to address a number of issues, including but not limited to:

- Goals for solid waste management in King County;
- A detailed inventory and description of all existing solid waste handling facilities and any deficiencies in meeting current solid waste handling needs;
- The estimated long-range needs for solid waste handling facilities projected 20 years into the future;
- A surveillance and control program designed to provide ongoing efforts to permit solid waste facilities and eliminate illegal accumulation or dumping;
- A six-year construction and capital plan for solid waste facilities that meets the appropriate standards and laws related to zoning, waste handling, landfill operation, air and water pollution, and protection of public health;
- A plan for financing both capital costs and operational expenditures of the existing and proposed solid waste management system.⁴

History. King County's existing CSWMP was adopted in 2001.⁵ In 2006, the Solid Waste Division (SWD) began an effort to update the 2001 Plan that culminated in the Draft 2013 Comprehensive Solid Waste Management Plan. However, the King County Council requested that SWD undertake a more rigorous review of the transfer system prior to finalizing the CSWMP following a decline in projected system tonnage after the recession, as well as the possibility that five cities were at that time planning to leave the system in 2028. The Executive responded to this request by transmitting the Transfer Plan Review Part 1 Report⁶ in 2014 and the Transfer Plan Review Part 2 Report⁷ in 2015.

In the 2017-2018 budget ordinance,⁸ the Council included a proviso withholding \$1,000,000 until the Executive transmits an updated CSWMP by March 31, 2018, and

² K.C.C. 10.24.020

³ R.C.W. 70.95

⁴ K.C.C.10.24.030, R.C.W. 70.95.090

⁵ Ordinance 14236

⁶ Motion 14145

⁷ Proposed Motion 2015-0246. The Transfer Plan Review Part 2 Report was transmitted to Council, but ultimately lapsed without action.

⁸ Ordinance 18409

also requires that the transmitted Plan include a range of strategies to address the region's waste, including alternatives to landfilling, and an analysis of their costs and benefits. Subsequent supplemental budget ordinances amended the proviso to also require that the CSWMP address current waste transfer capacity needs in Northeast King County⁹ and to change the transmittal date to July 26, 2018.¹⁰

CSWMP Development Process. The development and approval process for the CSWMP is governed by a complex combination of state law, county code, and the interlocal agreements with the partner cities.

Coordination with Advisory Committees. Over the last two years, SWD in conjunction with the Solid Waste Advisory Committee (SWAC) and the Metropolitan Solid Waste Management Advisory Committee (MSWMAC) have engaged in a process to update the Draft 2013 Comprehensive Solid Waste Management Plan which informed the transmitted Plan. Both SWAC, which includes representation by interested citizens and waste management and recycling groups, and MSWMAC, which is made up partner city representatives, are charged with advising the County on solid waste planning, management, and policy, and must review and make recommendations on the CSWMP before transmittal to the Council.¹¹ Both advisory committees have issued advisory notes expressing support of the transmitted Plan (Attachments 4 and 5).

Public Comment Period and SEPA Review. King County Code¹² requires SWD to seek public comment on a draft Plan for at least 30 days, in addition to the public review and comment procedures required by the State Environmental Policy Act (SEPA). SWD held a 60-day public comment period on a draft Plan and a draft non-project Environmental Impact Statement (EIS) from January 8, 2018 to March 8, 2018. A responsiveness summary for comments made during the public comment period is found in Appendix E of the transmitted Plan. Executive staff indicate they are working on finalizing the EIS and anticipate completion by the end of September. State law provides for a seven-day waiting period after a final EIS is issued during which action may not be taken.¹³

State Agency Preliminary Review. State law requires the County to submit a draft CSWMP to the Department of Ecology (Ecology) for technical review. Concurrently with the Ecology review, the Washington Utilities and Transportation Commission reviews the cost assessment questionnaire prepared as part of the draft CSWMP and the Department of Agriculture reviews the Plan for compliance with plant pest and disease quarantines. Review letters from the three state agencies are provided in Appendix G of the transmitted Plan. In their review letter, Ecology provided a series of required and suggested items to be addressed prior to Ecology approval, and also commended the Division on its work on the CWSMP, as well as its public involvement process and responsiveness to comments. The CSWMP notes that Ecology comments have been considered in the transmitted Plan.

⁹ Ordinance 18577

¹⁰ Ordinance 18766

¹¹ K.C.C. 10.24.020, R.C.W. 70.95.165, K.C.C. 10.25.110, Amended and Restated Interlocal Agreement

¹² K.C.C. 10.24.020

¹³ Washington State Administrative Code 197-11-070

CSWMP Approval Process. Per the Amended and Restated Interlocal Agreements (ILAs) with the partner cities, the CSWMP is adopted when the Plan is approved by the King County Council and a proportion of the cities who have executed ILAs acting within a certain period of time. After the CSWMP is adopted by the County Council and requisite number of cities, the final Plan will be submitted to Ecology for formal approval.

Council Process. The transmitted Plan has been designated a mandatory dual referral and referred to both the Committee of the Whole and the Regional Policy Committee.

King County Code¹⁴ grants the Solid Waste Interlocal Forum (SWIF) with the responsibility to review and comment on the CSWMP, as well as facilitate the approval of the plan by the cities. The Regional Policy Committee (RPC) is designated by the partner city ILAs as the SWIF.

Additionally, King County Code¹⁵ suggests the Committee of the Whole may hold hearings on the draft CSWMP, but requires the Council to hold a public hearing on the final CSWMP before adoption.

City Process. The ILAs outline the process for city adoption, specifically stating that the CSWMP is adopted when it:

...is approved by cities representing three-quarters of the population of the incorporated population of jurisdictions that are parties to the interlocal agreements. In calculating the three-quarters, the calculations shall consider only those incorporated jurisdictions taking formal action to approve or disapprove the Comprehensive Plan within 120 days of receipt of the Plan. The 120-day time period shall begin to run from receipt of an incorporated jurisdiction of the SWIF's recommendation on the SW Comprehensive Plan, or, if the SWIF is unable to make a recommendation, upon receipt of the SW Comprehensive Plan from the SWIF without recommendation. (Section 11.6.b)

The ILAs also provide for a process should the CSWMP be approved by the King County Council, but not receive approval of three-quarters of the cities acting on the Plan. If the parties are unable to resolve their disagreement, then the ILAs dictate that the CSWMP shall be referred to Ecology to resolve any disputes by approving or disapproving the Plan.

King County Regional Solid Waste System

In the regional solid waste system, the County is responsible with providing solid waste planning, management, transfer, and disposal services through 2040 for the 37 partner cities that have signed interlocal agreements (ILAs). By ILA and state law,¹⁶ the partner cities manage solid waste handling within their jurisdictions, and, in general, contract with private solid waste haulers to provide service within the city. Private haulers also collect recyclable materials and yard/wood waste, and take the materials to their own facilities for processing and sale. In the unincorporated area, collection services are

¹⁴ K.C.C. 10.24.020

¹⁵ K.C.C. 10.24.020

¹⁶ R.C.W. 35.21.120

provided by private haulers operating under certificates issued by the Washington Utilities and Transportation Commission.

The County's Solid Waste Division (SWD) operates eight transfer stations, two drop boxes, the Cedar Hills Regional Landfill, and waste prevention and recycling programs for the unincorporated area and 37 partner cities. As of 2017, there were approximately 1.5 million residents and 771,000 people employed in the service area.¹⁷ King County's solid waste facilities are distributed throughout the region, as shown in Figure 1.

King County receives solid waste at its transfer stations and drop boxes from solid waste haulers and self-haul customers. These waste loads are consolidated, transferred onto trailers, and transported by truck to the Cedar Hills Regional Landfill in unincorporated Maple Valley. For recyclables dropped off at transfer stations, the County contracts with a private hauler for collection, processing, and sale.

The County also is responsible with maintaining and monitoring seven closed landfills that were constructed in previous decades, under different and less rigorous state and federal standards than those currently in place.¹⁸ State law provides for minimum monitoring and maintenance requirements for closed landfills that vary depending on the year that the landfill closed. The CSWMP notes that all but one of the closed landfills have reached the end of their required monitoring periods, but ongoing maintenance and monitoring are still required because the landfills have not yet been determined by authorities to be stable. Ecology has the ultimate authority on when a closed landfill is deemed to be stable such that monitoring and maintenance activities may be terminated.¹⁹

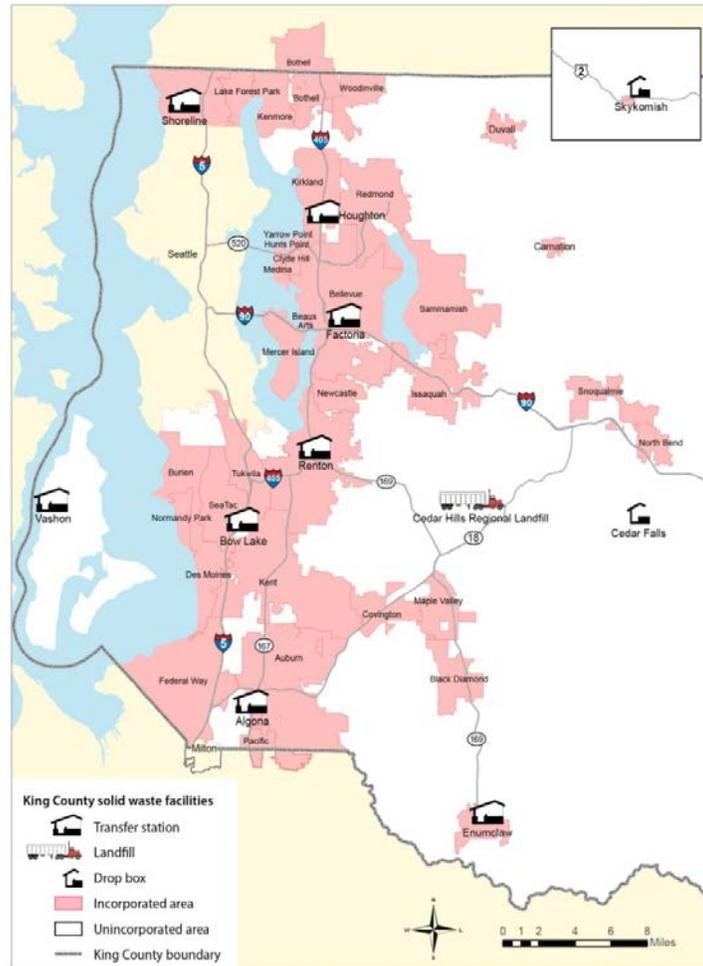
The solid waste system is funded by fees collected from customers. The CSWMP notes that SWD is an enterprise fund and manages nearly all of its expenses with revenues earned through these fees.

¹⁷ CSWMP, Page 2-1

¹⁸ King County also has custodial responsibilities for two other closed landfills, but because they were excavated to build transfer stations on site, very little waste remains and monitoring is no longer necessary (CSWMP, Page 6-15).

¹⁹ Motion 14691, Attachment A, Report on Plan to Stabilize Closed Landfills

Figure 1. Map of County Solid Waste Facilities



Recent Policy Decisions on Transfer Network and Disposal

The King County Council and its regional partners have made a number of decisions in recent years concerning transfer network planning and solid waste disposal. These decisions are summarized below.

Transfer Station Network Planning. In 2007, the King County Council accepted and approved the Solid Waste Transfer and Waste Management Plan (2007 Transfer Plan),²⁰ which made recommendations for replacing and modernizing the aging transfer network, much of which had been constructed in the 1960s. The 2007 Transfer Plan recommended:

- Replacing the Bow Lake Transfer Station located in Tukwila and the Factoria Transfer Station located in Bellevue at their current locations;
- Replacing the Algona Transfer Station with a new facility in South King County at a site to be determined;

²⁰ Ordinance 15979

- Constructing a transfer station in Northeast King County at a new site to be determined;
- Retaining the Shoreline, Enumclaw, and Vashon transfer stations, as well as the Cedar Falls and Skykomish drop boxes; and
- Closing the Algona, Houghton/Kirkland, and Renton transfer stations “when replacement capacity is available.”

Between 2011 and 2013, the County and its city partners in the regional solid waste system entered into a process to extend the interlocal agreements (ILAs) through 2040. At the time, five cities – Bellevue, Clyde Hill, Hunts Point, Medina, and Yarrow Point – chose to retain the original ILA in effect through June 2028.

In 2013, following a decline in projected system tonnage after the recession, as well as the possibility that the five cities may leave the system in 2028, the Council directed SWD via proviso²¹ to conduct a review of the 2007 Transfer Plan with system stakeholders. The review was intended to determine if changes to the plan were needed to ensure that the transfer system would be sized and configured appropriately to meet current and anticipated needs, and also to determine whether changes could be made to reduce future expenditures while still meeting desired service objectives and levels. The resulting report, the Transfer Plan Review Final Report,²² was transmitted in 2014 and affirmed the need for an upgraded Factoria Transfer Station to be constructed and for the siting process to proceed for the new South County Transfer Station, but also indicated that operational approaches exist that may preclude the need for a new Northeast station.

The Council subsequently directed SWD to continue to evaluate the operational approaches to manage system needs in Northeast King County.²³ The resulting Transfer Plan Review Part 2 Report²⁴ was transmitted in 2015. Assuming that the five cities referenced earlier would leave the system in 2028 and that the Houghton Transfer Station would close sometime before 2023, the Transfer Plan Review Part 2 Report recommended not building a new Northeast station at that time, but to keep it as a potential option in the future. Additionally, the report recommended further development and testing of the identified demand management strategies, including a 12-month pilot to test the effectiveness and potential impacts of extended hours and peak-hour pricing at some transfer stations.

In 2016, SWD proposed a pilot program in the 2017-2018 solid waste fee legislation²⁵ intended to test the effectiveness of peak-hour pricing and extended hours at managing transactional demand in the absence of a new Northeast transfer station and with the anticipated closure of the Houghton Transfer Station. In the 2017-2018 biennial budget,²⁶ the Council appropriated approximately \$2 million to support this pilot demand management program.

²¹ Ordinance 17619, Section 56, Proviso P1

²² Motion 14145

²³ Motion 14145

²⁴ Proposed Motion 2015-0246. The Transfer Plan Review Part 2 Report was transmitted to Council, but ultimately lapsed without action.

²⁵ Ordinance 18377

²⁶ Ordinance 18409

In July 2017, citing the potential to expand Cedar Hills, as well as concerns with the planned demand management pilot, the City of Bellevue expressed an intent to sign an extended ILA that would commit the City to the solid waste system through 2040, but under the condition that the County would not move forward with the demand management pilot and would instead begin the siting process for a new Northeast Recycling and Transfer Station. Ten other cities expressed support for beginning the siting process via an advisory note,²⁷ and called for significant mitigation and additional environmental review if the demand management pilot were to continue.

In October 2017, the Council canceled the demand management pilot and directed \$1 million of the funds appropriated for the pilot towards transfer capacity planning in Northeast King County.²⁸ Following the cancellation of the pilot, Bellevue signed the extended ILA, with the remaining four cities following shortly thereafter. As of this year, all 37 cities have now signed the extended ILA that ensures their system participation through 2040.

SWD has moved forward with implementing other recommendations in the 2007 Transfer Plan. Construction was completed for the Factoria and Bow Lake Recycling and Transfer Stations and both stations are open to the public. A site has been identified for a South County Recycling and Transfer Station to replace the Algona Transfer Station that is adjacent to the existing station. The Council approved construction and land transfer agreements for the replacement station with the City of Algona in 2017.²⁹

Cedar Hills Regional Landfill. King County's Cedar Hills Regional Landfill has served as the final disposal location for the region's mixed municipal solid waste since opening in 1965. In 2017, Cedar Hills received approximately 931,000 tons of garbage, which is 11 percent higher than had been estimated in 2016.³⁰

Capacity at the landfill is based on acreage within the permitted boundaries of the facility, as well as associated airspace. The Cedar Hills Landfill Tonnage and Capacity Report, required by proviso³¹ and transmitted to the Council earlier this year, indicated that "without further development, Cedar Hills will reach capacity in 2028."³²

Policy decisions over the last decade have been based on analysis indicating that keeping the landfill open as long as possible is the most economical alternative for waste disposal. The County's 2007 Solid Waste Transfer and Waste Management Plan stated that, "extending the life of Cedar Hills is cost-effective for the region's ratepayers as well as the county," and recommended taking steps to extend the life of the landfill for as long as possible.³³

²⁷ Metropolitan Solid Waste Management Advisory Committee, Advisory Note – May 1, 2017

²⁸ Ordinance 18577 and Motion 14968

²⁹ Ordinance 18597 and Ordinance 18607

³⁰ Motion 15174, Attachment A, Cedar Hills Landfill Tonnage and Capacity Report

³¹ Ordinance 18409, Section 107, Proviso P2

³² Motion 15174, Attachment A, Cedar Hills Landfill Tonnage and Capacity Report, p. 2

³³ Ordinance 15979, Attachment A, Solid Waste Transfer and Waste Export System Plan, p. 4

In 2010, the Council approved a Project Program Plan for Cedar Hills,³⁴ which advanced a plan to expand the landfill by 56.5 acres by adding several new refuse areas at an estimated cost of \$70 million.

As part of the 2015-2016 biennial budget,³⁵ the Council approved funding to develop a revised plan for the landfill to study additional options to expand the landfill's capacity beyond what had been approved in the 2010 plan. An early version of the Cedar Hills Site Development Alternatives Final Report (Site Development Alternatives Report), prepared for SWD by an outside consulting team, was shared with the Council in 2016 but not formally transmitted for review or adoption. The Site Development Alternatives Report identified a number of development scenarios for the landfill that could extend the closure date to 2050 or beyond, with costs ranging from \$206 million to \$504 million, depending on the selected scenario.

As part of the 2017-2018 biennial budget,³⁶ the Council approved \$37 million in expenditures to continue the work to develop Area 8, a 7.8 million³⁷ cubic yard waste disposal cell at the landfill.³⁸

In addition, the Council approved \$400,000 to develop a Revised Site Development Plan for the Cedar Hills Regional Landfill, update the 2010 plan, prepare an updated Environmental Impact Statement, and identify potential expansion alternatives.

ANALYSIS

How the Analysis section is organized. The analysis in this staff report includes a review of the proposed ordinance and the chapters of the transmitted CSWMP. Analysis of each chapter discusses the consistency with adopted policy and plans, environmental sustainability, the fiscal implications of policies and recommended actions, as well as highlights any additional issues for Council consideration.

This staff report includes sections on:

- Transmitted 2019 CSWMP Overview
- Proposed Ordinance 2018-0375
- Chapter 2 (The Existing Solid Waste System)
- Chapter 3 (Forecasting and Data)
- Chapter 4 (Sustainable Materials Management)
- Chapter 5 (Solid Waste Transfer and Processing)
- Chapter 6 (Landfill Management and Solid Waste Disposal)
- Chapter 7 (Solid Waste System Finance)

³⁴ Motion 13382

³⁵ Ordinance 17941

³⁶ Ordinance 18409

³⁷ SWD, Cedar Hills Regional Landfill Annual Report - 2016

³⁸ According to SWD, design of Area 8 was completed in 2017, construction is currently underway, and the new cell is anticipated to receive refuse beginning in 2019.

CSWMP Organization and Plan Overview. The transmitted Plan uses goals, policies, and recommended actions to describe the strategies for managing the County's solid waste system. According to the Plan:

- **Goals** reflect the long-term outcomes and aspirations for the regional system and should not change through the life of the Plan.
- **Policies** provide broad direction and authorization for services and system priorities and would not be anticipated to change through the life of the Plan. Different from the 2001 CSWMP, the policies in the transmitted Plan do not identify specific actors and do not use prescriptive words (e.g., shall). Executive staff indicate that, with this Plan, the intent was to make policies broad enough to guide all participants in the regional system over the long term and that assignments of actors are made as part of the actions to implement the policies. Executive staff note that because state law requires system participants to act consistently with Plan policy guidance and authorization, "shall" is implied with regard to policies.
- **Recommended Actions** are targeted, specific, and time-based to implement policies and could include: programs, studies, infrastructure improvements, and regulations. The transmitted Plan notes that recommended actions may be changed outside of the formal Plan update process to adapt to changing conditions.

Attachment 6 to the staff report lists all goals, policies, and recommended actions found in the transmitted Plan.

A brief summary of chapter topics is found below:

- **Chapter 1: Introduction.** This chapter introduces the purpose of the CSWMP, the mission of the Solid Waste Division, a summary of how the Plan is organized, and an overview of the Plan review process. Chapter 1 does not contain any goals, policies, or recommended actions, so is not further discussed in the analysis portion of the staff report.
- **Chapter 2: The Existing Solid Waste System.** This chapter describes the existing solid waste system, providing an overview of the collection, transfer, transportation, processing, and disposal systems for garbage, recyclables, organics, and construction and demolition debris.
- **Chapter 3: Forecasting and Data.** This chapter provides an overview of the monitoring of solid waste disposal, recycling, and waste prevention, and the forecasting of future trends, as well as how the information is used in planning decisions.
- **Chapter 4: Sustainable Materials Management.** Sustainable materials management is "a systemic approach to using and reusing materials more

productively over their entire life cycles,” which has been adopted by the U.S. Environmental Protection Agency, as well as Ecology.³⁹ This chapter discusses waste prevention and recycling programs.

- **Chapter 5: Solid Waste Transfer and Processing.** This chapter addresses the County’s solid waste transfer and processing system and includes a discussion of transfer network planning in Northeast King County, services offered at transfer stations, and the processing of recyclables and organics.
- **Chapter 6: Landfill Management and Solid Waste Disposal.** This chapter addresses the County’s landfill management practices, as well as makes a recommendation on long-term disposal of the County’s waste.
- **Chapter 7: Solid Waste System Finance.** This chapter describes the financial policies and actions that help guide the solid waste system’s operation and investments, and summarizes SWD’s funding sources, revenues, and expenditures.
- **Appendices.** The CSWMP contains the following appendices:
 - Appendix A – Utilities and Transportation Commission Cost Assessment
 - Appendix B – Six-year Capital Improvement Program
 - Appendix C – Amended and Restated Solid Waste Interlocal Agreement
 - Appendix D – Waste Reduction Model (WARM) Inputs Used in Analysis
 - Appendix E – Responsiveness Summary
 - Appendix F – Descriptions of Disposal Options Considered
 - Appendix G – Agency Plan Review Letters

KCC Content Requirements for CSWMP. King County Code⁴⁰ outlines a series of content requirements for the CSWMP that were developed in the mid-1980s. The CSWMP, as transmitted, incorporates most of the topics identified in code, but does not include “a current inventory and description of solid waste collection needs and operations within each respective jurisdiction” and a “review of potential areas that meet the siting criteria as outlined in RCW 70.95.165.” Council staff have reached out to Executive staff to see whether this information is available. Policy makers may wish to consider including available information as an appendix to the CSWMP.

Proposed Ordinance 2018-0375.2

Proposed Ordinance (PO) 2018-0375.2 would adopt and approve the 2019 Comprehensive Solid Waste Management Plan as a revision of the 2001 Comprehensive Solid Waste Management Plan.

A new approach was taken with the transmitted PO 2018-0375.1 with regard to codifying the policies in the 2019 CSWMP. In the ordinance adopting the 2001 CSWMP, all policies were codified in King County Code Title 10 (Solid Waste). For the proposed

³⁹ U.S. Environmental Protection Agency, “What is Sustainable Materials Management?: - <https://www.epa.gov/smm/sustainable-materials-management-basics>

⁴⁰ K.C.C. 10.24.030

ordinance, however, only the single policy (F-1) from the Solid Waste System Finance Chapter (Chapter 7) was proposed to be codified and all 2001 Plan policies were proposed to be repealed. In a separate section of K.C.C. Title 10, the proposed ordinance would also codify a series of SWD financial policies identified in Recommended Action 1-f. The full list of the SWD financial policies identified in Recommended Action 1-f is provided in the discussion of Chapter 7. Recommended Actions 2-f through 11-f from the Solid Waste System Finance Chapter in the CSWMP are not codified in the proposed ordinance. Recommended Action 1-f is the only action in the transmitted Plan that would have been codified under the proposed ordinance.

For consistency, the striking amendment that was passed in the Regional Policy Committee removed the policy in Recommended Action 1-f from the body of the ordinance.

Chapter 2: The Existing Solid Waste System

Chapter 2 describes the processes, infrastructure and programs that comprise the existing solid waste system in King County. Policies and recommended actions in this chapter focus on planning priorities of the system: maintaining a balance of public and private facilities, sustaining collaborative partnerships, incorporating social justice and considering climate change and sustainability within the system.

Consistency with adopted policies and plans

The solid waste system is a mix of public and private solid waste transfer and processing facilities. By interlocal agreement with the 37 partner cities, King County is responsible for the transfer and disposal of solid waste, and cities are responsible with managing solid waste handling within their jurisdictions. In general, cities contract with the private sector for curbside pickup and transportation.⁴¹ For recyclables and construction and demolition waste, collection, transfer, and disposal is operated entirely by private companies.⁴²

Policy ES-1 recommends that this combination of facilities remain in the future. The existing solid waste system relies on eight public transfer stations and two rural drop boxes for waste disposal, 17 private facilities to process recyclables, and several private collection companies to collect waste and recyclable materials.

This policy is consistent with the 2007 Solid Waste Transfer and Waste Management Plan,⁴³ which includes the same recommendation describing additional responsibilities:

Maintain the current mix of public and private ownership whereby:

- *The private sector is the primary provider of the collection and processing of solid waste, recyclables, and construction, demolition, and landclearing debris*

⁴¹ State law (RCW 81.77 and 36.58) prohibits counties from collecting solid waste or regulating collection companies. Two cities, Enumclaw and Skykomish, operate their own collection systems.

⁴² The exception being self-hauled materials, which may enter through a public transfer station.

⁴³ Ordinance 15979

- *The public sector is the primary provider of transfer services.*⁴⁴

Policy ES-2, which recommends working with the Division's advisory committees, the cities, and the Solid Waste Interlocal Forum,⁴⁵ is consistent with adopted policies and plans, including the Amended and Restated Solid Waste Interlocal Agreements (ILAs), K.C.C. Chapter 10.28 relating to the Solid Waste Advisory Committee, and K.C.C. 10.25.110 relating to the Metropolitan Solid Waste Management Advisory Committee.⁴⁶ Both King County Code and the ILAs reiterate the duties of the Division to coordinate and collaborate with these committees, as well as establish the roles and responsibilities of the committees to advise the County on its solid waste management system.

Policy ES-3 identifies incorporating principles of equity and social justice into solid waste system planning. This policy is consistent with County plans, including the Executive's King County Equity and Social Justice Strategic Plan 2016-2022, which emphasizes King County's commitment to ensuring that equity and social justice are considered in the development and implementation of policies, programs, and funding decisions. The transmitted Plan notes that implementation of these practices within solid waste management planning include a fair distribution of transfer facilities, providing technical assistance, translation of materials into multiple languages, and engagement to ensure equal opportunity for input in the siting of new transfer facilities.

Policy ES-4 considers climate change impacts and sustainability when planning for facilities, operations, and programs. This policy is consistent with adopted policies and plans. The relevant policy document is the 2015 King County Strategic Climate Action Plan,⁴⁷ which establishes a goal to encourage and support behaviors, purchasing, and waste management strategies that minimize lifecycle impacts of consumption and materials by the community. SWD's sustainability efforts are discussed in greater detail in Chapter 4 relating to sustainable materials management.

Environmental Sustainability

Solid waste is identified as an important contributor to greenhouse gas emissions within King County's geography.⁴⁸ The policies identified in Chapter 2 support the County's efforts at maintaining partnerships, incorporating social justice and equity, and considering climate change and sustainability in solid waste planning and implementation. Existing efforts to reduce emissions have included efficiency improvements in processing and transfer, a carbon-neutral commitment by 2025, and biogas recapture from the Cedar Hills landfill. Specific waste reduction and recycling policies and actions are further discussed in Chapter 4.

⁴⁴ 2007 Solid Waste Transfer and Waste Management Plan, p. 23

⁴⁵ As noted previously, K.C.C. 10.24.020 grants the Solid Waste Interlocal Forum (SWIF) with the responsibility to review and comment on the CSWMP, as well as facilitate the approval of the plan by the cities. The Regional Policy Committee (RPC) is designated by the partner city ILAs as the SWIF.

⁴⁶ Ordinances 15912 and 16320

⁴⁷ Motion 14449

⁴⁸ Motion 14449, 2015 King County Strategic Climate Action Plan

Fiscal implications of policies

The CSWMP sets policy to guide current and new solid waste system efforts. No fiscal implications have been identified relating to the policies in Chapter 2, as they reflect existing solid waste system priorities. The Council would have the opportunity to review specific impacts related to implementation of the policies through the budget process.

Other issues for committee consideration

No issues identified.

Chapter 3: Forecasting and Data

Monitoring and Reporting. Chapter 3 addresses solid waste forecasting and data through policies and recommended actions focused around monitoring and reporting. Policies FD-1 through FD-2 and Recommended Actions 1-fd, 3-fd and 4-fd outline recommendations to collect, review, standardize and report data to support future planning and decision-making for the solid waste system. Policies FD-3 and FD-4 and Recommended Action 2-fd outline recommendations to collect and monitor data associated with waste prevention, recycling, and emerging technologies to identify opportunities to enhance recycling.

Consistency with adopted policies and plans

The management of the solid waste system relies on existing data and forecasts to inform options on future infrastructure and programmatic needs. Policies FD-1 through FD-3 address the monitoring and reporting of amount, composition, and source of solid waste, waste prevention and recycling activities, and the updating of solid waste tonnage forecasts. Recommended Actions 1-fd through 4-fd standardize data collection periods, and call for conducting solid waste characterization studies and resolving data inconsistencies. Policy FD-4 addresses the monitoring of emerging technologies to identify opportunities in managing solid waste and recyclables. These policies and recommended action items are consistent with adopted policies.

K.C.C. 10.14.050 establishes the County's intent to reduce and divert waste from landfills through 14 objectives. Several of the objectives target enhanced data collection to inform strategies and actions to increase diversion rates:⁴⁹

- *Adopt an aggressive and regional approach to finding solutions to solid waste problems by working cooperatively with other cities and counties whenever it is appropriate;*
- *Target areas of the waste stream that are resources and have the greatest potential for resource and beneficial use. Targets should change over time as additional diversion occurs and efforts move closer to zero waste of resources;*
- *Annually project the amounts of waste being diverted from county landfills; and*

⁴⁹ Diversion rate represents the amount of material that is diverted or prevented from entering disposal in the landfill as a result of efforts such as recycling, composting, reuse, or other program (CSWMP, xi).

- *Measure program results through a variety of performance measures such as cost effectiveness, waste characterization data, recycling data, customer surveying, customer communication and participation in recycling and resource conservation programs.*

All policies and recommended actions in Chapter 3 broadly address gaps within current data collection processes that inform policymaking and implementation of recommended actions in the solid waste system. As discussed in the body of Chapter 3, SWD relies significantly on data collection to track progress and evaluate waste prevention and recycling efforts. The recommended actions are those that SWD and partners would implement in their data collection processes, including standardizing sampling methodology (Recommended Action 1-fd), performing characterization studies of waste streams (Recommended Action 2-fd), monitoring and forecasting data (Recommended Action 3-fd) and joining in voluntary agreements with recycling companies to improve data reporting (Recommended Action 4-fd).

Environmental Sustainability

The CSWMP and the 2015 Strategic Climate Action Plan⁵⁰ both identify a target goal of zero waste by 2030, with an interim goal to achieve a recycling rate of 70 percent before 2030. As of 2016, the countywide recycling rate is 52 percent according to Ecology-provided data. Data and forecasting support the evaluation of waste reduction and recycling programs, and support programs and targets that can be tailored to specific waste streams or generators. Specific waste reduction and recycling policies and actions are further discussed in Chapter 4.

Fiscal implications of policies

Data collection and characterization studies are funded through solid waste disposal fees. No fiscal implications have been identified relating to the policies and recommended actions in Chapter 3. Executive staff indicate that if the need for additional resources is identified at some point in the future, it would be proposed through the budget process.

Other issues for committee consideration

No issues identified.

Chapter 4: Sustainable Materials Management

The policies and recommended actions in Chapter 4 support a goal of zero waste of resources⁵¹ by 2030, with an interim goal to achieve a 70 percent recycling rate, through a combination of efforts in priority order that includes waste prevention and

⁵⁰ Motion 14449

⁵¹ Zero waste is “a planning principle designed to eliminate the disposal of materials with economic value.” This principle does not mean that no waste will be disposed, but instead proposes that maximum feasible and cost-effective efforts be made to prevent, reuse, and recycle waste (CSWMP, Page xiii).

reuse, product stewardship, recycling and composting, and beneficial use. Key policy themes in this chapter are planning, implementation, and infrastructure improvements.

Planning. Policies S-1 and S-2 recommend setting achievable targets to reduce waste generation and disposal, and using a combination of tools to implement waste prevention and recycling programs. Recommended actions include targets for measurement (17-s and 18-s), reassessing options to achieve a 70 percent recycling rate (13-s) if not achieved, exploring technologies to increase recycling and resource recovery (12-s), regulations for green building and construction waste (23-s through 26-s), minimum collection standards (32-s), and policies to make recycling convenient for mixed-use and residential facilities (36-s and 37-s).

Implementation. Policies S-3 through S-4 support the goal of zero waste through waste prevention, material reuse, and product stewardship. The department has identified that nearly 70 percent of all materials disposed in the landfill are resources that could have been recycled or reused.⁵² Associated recommended actions include: improving public operations and sponsored events (1-s and 21-s), forming a regional responsible recycling forum (2-s), developing a process to amend the designated recyclables list (16-s), reducing common single-use products (14-s), reducing food waste through surplus meals and food scrap recycling (7-s, 15-s), pursuing product stewardship (11-s), and using grants to support waste reduction and recycling efforts (19-s, 20-s, 22-s).

Infrastructure Improvements. Policies S-5 through S-8 address the efficiency, health, and safety of collection and processing materials for recycling, composting, and reuse; supporting markets for recyclable materials; and maximizing the amount of materials diverted from the landfill. Associated recommended actions include: developing infrastructure to increase food scrap recycling (8-s), considering service improvements in unincorporated areas (30-s, 33-s), including non-residential recycling services in city contracts (34-s), exploring options for the curbside collection of bulky items (31-s), exploring options to increase diversion of construction debris (27-s), ensuring construction and demolition debris is managed in an environmentally sound manner (29-s), considering an incentive-based rate structures for non-residential customers (35-s), and supporting recyclable markets (10-s).

Education Programs. A number of recommended actions address awareness, outreach, and education as strategies to increase participation in area improvements listed above. These recommended actions include providing regional education outreach support and incentive programs (3-s), providing programs in schools (4-s), educating customers on recycling techniques (5-s and 6-s), providing technical assistance to external agencies (9-s), and increasing education related to construction and demolition materials (28-s).

Consistency with adopted policies and plans

The King County Code⁵³ includes a goal of zero waste of resources by 2030 through maximum feasible and cost-effective prevention, reuse and reduction. The CSWMP maintains an interim goal of 70 percent recycling. These goals are supported by the

⁵² CSWMP, Page 4-2

⁵³ K.C.C. 10.14.020 (Ordinance 14811)

eight policies and 37 recommended actions in the chapter intended to prevent waste generation and increase recycling and reuse. These policies and recommended actions are consistent with adopted policies and plans, including the Strategic Climate Action Plan (SCAP) and K.C.C. 10.14.050.

Strategic Climate Action Plan.⁵⁴ The County's Strategic Climate Action Plan (SCAP) establishes priorities to reduce greenhouse gas emissions contributing to climate change. As part of the County's efforts, the SCAP targets consumption and materials management as a goal area.

Specifically, the SCAP includes nine strategies intended to achieve a 70 percent recycling target by 2020 and zero waste of resources by 2030:

- *Conduct an outreach campaign and provide incentives and support to increase communitywide recycling and composting.*
- *Partner with haulers and recycling and composting businesses to increase productive reuse and recycling of materials.*
- *Develop a zero waste of resources grant program to incentivize reuse and recycling.*
- *Develop, expand, and support markets for reused and recycled materials and county-produced renewable resources.*
- *Provide tools and support to King County schools and other partners to improve waste prevention, resource conservation and efficiency efforts.*
- *Provide every-other-week garbage collection, require separation of garbage, recyclables and organics, including the cost of organics collection for all customers.*
- *Implement self-haul disposal bans of specified materials at transfer stations that provide recycling collection. Materials include wood, metal, cardboard, paper and yard waste.*
- *Engage customers at Recycling and Transfer Stations through enhanced customer assistance and signage.*
- *Add collection at Recycling and Transfer Stations of additional materials not widely available for collection elsewhere such as expanded polystyrene, plastic film, tires and mattresses.*

Overall, the CSWMP policies and recommended actions are consistent and supportive of these strategies. However, while both the SCAP and the CSWMP contain goals to achieve a 70 percent recycling rate, the SCAP establishes a deadline of the year 2020 whereas the CSWMP does not include a year and instead identifies it as an “interim” goal.

Every-Other-Week Garbage Collection Proviso. As part of the amended 2017-2018 biennial budget,⁵⁵ the Council included a proviso that required the Executive to conduct a public outreach process, prepare additional analysis on recycling rates, and provide a report to the Council prior to advancing any proposal to reduce garbage collection frequency from every week to every other week in the unincorporated area. The proviso

⁵⁴ Motion 14449

⁵⁵ Ordinance 18544, Section 68, Proviso P5

also stated that if garbage collection frequency is not planned to be reduced, the Executive could provide a letter stating this and no further reporting would be required. In November 2017, the Executive transmitted a letter to the Council stating: "Reduced garbage collection will not be pursued, from every week to every other week, in unincorporated areas of the County from this date [November 15, 2017] through the end of 2018."⁵⁶

The proposed CSWMP does not include any policies or recommended actions specifically calling for reduced garbage collection frequency in the unincorporated areas, consistent with the Executive's proviso response letter. It does, however, provide individual cities the flexibility to determine their own service needs via adoption of minimum collection standards. Recommended Action 32-s supports adoption of single-family and multi-family minimum collection standards, where garbage collection is required at least once a month for single-family and at least once a week for multi-family developments.

K.C.C. 10.14.050 County Intent – Reduce and Divert Waste from Landfills.⁵⁷ K.C.C. 10.14.050 establishes the County's intent to reduce and divert waste from landfills through 14 objectives, which are supported by the CSWMP. These objectives cover a range of potential county actions, including technical assistance and outreach to agencies and customers, targeting areas with the greatest potential for resource and beneficial use, supporting changes to green building and construction waste recycling, encouraging market development for recyclables, encouraging product stewardship, and improving data collection.

These objectives are reflected through the CSWMP's recommended actions and chapter body, which emphasizes regional partnerships, education, targeting key waste streams, product stewardship, market development and county operations. In addition, many of the best practices recommended for implementation in the Division's 2014 Sustainable Solid Waste Management Study are reflected in the Chapter's recommended action list. A number of these actions such as those related to waste prevention or reuse have been implemented through existing offerings, such as the Food: Too Good to Waste, Threadcycle, Green Tools, or "What do I do with...?" programs.

Green Building Ordinance.⁵⁸ The County's Green Building Ordinance provides for environmental performance measures for County-owned facilities, such as attaining Leadership in Energy and Environmental Design (LEED) certification. Under this ordinance, County facilities are required to meet an 85 percent diversion rate for construction and demolition materials by 2025 and eight percent diversion rate by 2016. Additionally, the ordinance requires the County to implement practices that will increase the awareness, certification, and innovation in green building and sustainable development. CSWMP Recommended Actions 23-s through 29-s are consistent with this ordinance through adopting green building policies and construction debris recycling codes, and supporting cities in their own adoption of both codes.

⁵⁶ Motion 15053

⁵⁷ Ordinance 15912

⁵⁸ Ordinance 17709

K.C.C. Chapter 10.30 Construction and Demolition Debris.⁵⁹ K.C.C. Chapter 10.30 establishes construction and demolition waste disposal facilities regulations. In accordance with K.C.C. 10.30.020, generators, handlers, and collectors are required to dispose of construction and demolition debris materials at designated facilities for recycling. Recommended Actions 26-s through 29-s are consistent and supportive of continuing efforts at recycling construction and demolition debris. Recommended Actions 26-s and 28-s emphasize outreach, education and training to increase and improve regional recycling rates.

China Sword Initiative. Historically, China has served as a primary market for recyclable materials from the U.S., including King County. In 2017, China launched an initiative entitled "China Sword" or "National Sword," resulting in significantly stricter standards for recyclables for materials imported into China.⁶⁰ These restrictions include prohibiting low-grade plastics and unsorted paper, significantly lower contamination standards, and a temporary suspension on import licenses. Full impacts of the China Sword Initiative are not fully understood at this time; however, the policies and recommended actions in the CSWMP support expanding and supporting local markets for recyclables as long-term alternatives. This is consistent with the SCAP strategy to "Develop, expand, and support markets for reused and recycled materials..."

Policy S-5 seeks to identify and support end markets for recycled and composted materials with regional partners. The Responsible Recycling Task Force was convened in April 2018 consisting of representatives from King County, the City of Seattle, cities in King County, solid waste haulers, and stakeholders to consider and recommend local actions in light of the China Sword Initiative. These recommendations are anticipated to consider immediate, interim, and long-term actions relating to quality of recyclables, consumer education, local processing and domestic demand, and data measurement. Executive staff note that they expect the recommendations of the Task Force to be consistent with the policies and recommended actions in the CSWMP.

Environmental Sustainability

Significant greenhouse gas emissions are associated with consumption and waste disposal.⁶¹ According to the CSWMP, an estimated 55 million metric tons of carbon dioxide equivalent was generated in King County in 2008 related to consumption.⁶² Sustainable materials management, the topic of this chapter of the CSWMP, centers equally on waste prevention and reuse, product stewardship, recycling and composting, and beneficial use. These efforts ultimately contribute to reductions in greenhouse gas emissions from the solid waste system. The CSWMP incorporates the SCAP's goals for materials management and consumption into policies and recommended actions.

⁵⁹ Ordinance 18166

⁶⁰ Additional information on the China Sword initiative can be found in the Council Staff Briefing to Committee of the Whole on May 16, 2018 (2018-B0097)

⁶¹ Motion 14449, 2015 Strategic Climate Action Plan

⁶² Includes the emissions from all stages of a product's life, including resource extraction, farming, manufacturing, transportation, sale, use, and disposal.

Fiscal implications of policies

At this time, no additional fiscal implications are expected related to the policies identified in Chapter 4 given the long-range 20-year perspective that this work undertakes. Fiscal impacts from recommended actions will vary based on complexity of program and partnerships available at the time of implementation. The Council would have the opportunity to review specific impacts related to implementation of the recommended actions through the budget process. The 37 recommended actions were developed as a menu of items that could be implemented by the county, cities, or other partners based on customer demographics or priority needs. No recommended actions are required as a part of the CSWMP implementation.

Other issues for committee consideration

Ongoing Monitoring of China Sword Impacts. As described above, the China Sword Initiative has created uncertainty for international recyclable markets that may result in local impacts, including placement of recyclables in landfills and declining revenues from recycling.⁶³ The CSWMP includes several recommended actions to support the development of local markets for recycled materials to increase local independence on global markets and to reduce contamination for recycled materials for these markets. As noted above, the Responsible Recycling Task Force is continuing separate efforts to address these issues and is expected to produce a report identifying near-, mid-, and long-term solutions. The committee may wish to request updates on the impacts experienced by SWD resulting from the China Sword initiative and the ongoing work of the Responsible Recycling Task Force.

Chapter 5: Solid Waste Transfer and Processing System

Chapter 5 addresses the County's solid waste transfer and processing system through policies and recommended actions focused around two themes:

- 1. Infrastructure:** Policies T-1, T-2 and T-3, and Recommended Actions 1-t through 5-t outline recommendations for the system's waste transfer and processing infrastructure, which currently includes eight transfer stations (Shoreline, Houghton, Factoria, Renton Bow Lake, Algona, Enumclaw, and Vashon) and two rural drop boxes (Skykomish and Cedar Falls).
- 2. Environmental sustainability:** Policies T-4 and T-5, and Recommended Actions 6-t through 13-t outline recommendations to build and operate transfer facilities using green building and sustainable development practices, to provide for greater collection of recyclable materials and diversion of recyclables from the waste stream, and to educate consumers about recycling and proper disposal.

⁶³ 2018-B0097

Consistency with adopted policies and plans

Infrastructure. Policies T-1 through T-3, which call for providing solid waste transfer services and engaging cities and communities in developing new facilities and mitigating the impacts of existing facilities, and Recommended Actions 1-t through 5-t, which address specific components of the transfer system infrastructure, are consistent with adopted policies and plans.

The key policy documents related to solid waste transfer system infrastructure are the Solid Waste Transfer and Waste Management Plan (2007 Transfer Plan), which was adopted in 2007,⁶⁴ and the 2014 Transfer Plan Review Final Report.⁶⁵ In addition, the Council has adopted legislation related to the siting, financing, and construction of individual transfer stations.

The 2007 Transfer Plan recommended:

- Retaining five existing transfer facilities (Enumclaw, Shoreline, Vashon, Cedar Falls, and Skykomish);
- Constructing four new transfer stations (Bow Lake, Factoria, Northeast Lake Washington, and South County); and
- Closing three existing transfer stations when replacement capacity is available (Algona, Houghton, and Renton).

In 2011, the King County Auditor released a performance audit of transfer station capital projects⁶⁶ that recommended that SWD update its plans to re-examine financing options and station functionality and also to respond to excess capacity in the system that had resulted from decreases in tonnage during the recession.

The 2014 transfer plan report, which was based on additional analysis following the 2011 audit, recommended:

- Proceeding with the new Factoria station as designed;
- Developing a new South County station; and
- Investigating operational approaches that could potentially preclude the need for a new Northeast station.

A number of the recommendations from the 2007 Transfer Plan and 2014 report have been implemented:

- A new Bow Lake station was developed and opened in 2013;⁶⁷
- A new Factoria station was developed and opened in 2017,⁶⁸ and

⁶⁴ Ordinance 15979

⁶⁵ Motion 14145. A Phase 2 report was transmitted to the Council in 2015 (Proposed Motion 2015-0246) but ultimately lapsed without action.

⁶⁶ King County Auditor, Performance audit of Solid Waste transfer station capital projects, September 7, 2011, <https://www.kingcounty.gov/depts/auditor/auditor-reports/all-landing-pgs/2011/swd-ts-replace-2011.aspx>

⁶⁷ Motion 12522, Ordinances 16247, 16444, 16914

⁶⁸ Motion 13455, Ordinances 17435, 17618, 17830, 17832

- Agreements have been approved for the construction of a new South County station and the eventual closure of the nearby Algona station.⁶⁹

Planning for transfer capacity in Northeast King County between 2007 and 2014 was influenced both by the 2011 performance audit and also by the stated intention of the cities of Bellevue and the four Points communities to leave the regional solid waste system in 2028, at the end of their interlocal agreements, rather than agreeing to an extension to 2040 as the other cities in the system had done.

As part of the 2017-2018 biennial budget,⁷⁰ the Council appropriated \$2 million to implement a demand management pilot program to test operational alternatives to a new Northeast station.

However, after the City of Bellevue expressed intent in late 2017 to renew their participation in the regional solid waste system through 2040, and in response to a system-wide increase in tonnage accompanying the economic recovery,⁷¹ the Council expressed support for needed solid waste transfer capacity in Northeast King County.⁷² The Council also applied a portion of the funds that had been appropriated for the demand management pilot toward planning to assess waste transfer capacity needs in Northeast King County and to develop options to meet those needs.⁷³ After evaluating three potential options in the Draft CSWMP⁷⁴ (Houghton station as is, new Northeast station, or combination of existing and new), the transmitted CSWMP recommends development of a new Northeast station and eventual closure of the Houghton station (Recommended Action 1-t).

The Renton station was recommended for closure as part of the 2007 Transfer Plan. However, the transmitted CSWMP recommends that the County should retain the Renton station until the new urban transfer facilities have been completed and the impact of closure has been fully evaluated (Recommended Action 2-t).

The CSWMP also calls for the evaluation of a potential second scale and collection container at the Cedar Falls Drop Box (Recommended Action 3-t), a review of service level assessments to determine if there is a need for additional rural drop box capacity (Recommended Action 4-t), and periodic evaluations of the level of service criteria to ensure that the criteria remain relevant (Recommended Action 5-t).

Environmental sustainability. Policies T-4 and T-5, which call for operating transfer facilities with green building and sustainable development practices and for collecting and diverting recyclables at transfer facilities, and Recommended Actions 6-t through 13-t, which address specific aspects of recycling and resource recovery, are consistent with adopted policies and plans.

⁶⁹ Ordinances 18597, 18607

⁷⁰ Ordinance 18409

⁷¹ Actual tonnage in 2017 was 11 percent higher than estimates that had been made in previous years (Motion 15174)

⁷² Motion 14968

⁷³ Ordinance 18577

⁷⁴ The Public Review Draft CSWMP was released in January 2018

The key policy related to environmentally sustainable construction practices for County facilities is the Green Building Program,^{75,76} which requires LEED⁷⁷ Platinum status for new construction and LEED Gold for major remodels and renovations.⁷⁸ The Shoreline (opened in 2008) and Bow Lake (opened in 2013) transfer stations achieved LEED Platinum, and the Factoria (opened in 2017) transfer station achieved LEED Gold. The CSWMP states that that future transfer stations (South County, Northeast) will also comply with the County's Green Building Program (Policy T-4).

The 2011 Auditor's report on transfer station capital projects cautioned that, "meeting many LEED standards, especially those leading to Gold and Platinum certifications, results in high costs that may not produce long-term economic benefit."⁷⁹ Changing the County's green building requirements based on the concerns highlighted in the 2011 audit would require policy changes both to the County Code and the CSWMP.

The key policies related to recycling and resource recovery are included in the 2015 Strategic Climate Action Plan (SCAP).⁸⁰ Specifically, the SCAP identifies as targets:

- By 2020, 70 percent recycling rate of materials collected in King County; and
- By 2030, zero waste of resources that have economic value for reuse or recycling.⁸¹

The policies and recommended actions in Chapter 5 of the CSWMP are not this specific; rather, they relate to the actions SWD will take to explore prospects for the transfer of commercial loads of organics through transfer stations, to more sustainably manage organic wastes and assess advanced materials recovery and anaerobic digestion (Recommended Actions 6-t, 9-t, 10-t); continue to implement a resource recovery program at new recycling and transfer facilities (Recommended Action 7-t); encourage recycling processors to improve facility sorting and processing equipment and practices (Recommended Action 8-t); plan for emergency storage of debris (Recommended Actions 11-t, 12-t); and provide education and outreach on sharps disposal (Recommended Action 13-t). Broader waste prevention and recycling efforts not related to the transfer network and processing infrastructure are discussed in Chapter 4.

The text in Chapter 5 provides additional detail on local programs on resource recovery, processing commingled recyclables, collection of sharps, services for moderate risk wastes, processing organics, anaerobic digestion, and advanced materials recovery. However, SWD has noted elsewhere in the CSWMP and in other materials the

⁷⁵ K.C.C. 18.17

⁷⁶ Green building program requirements are also incorporated in the 2015 Strategic Climate Action Plan (Motion 14449)

⁷⁷ LEED means "Leadership in Energy and Environmental Design," a set of standards created by the United States Green Building Council.

⁷⁸ K.C.C. 18.17.020

⁷⁹ King County Auditor, Performance audit of Solid Waste transfer station capital projects, September 7, 2011, p. 11.

⁸⁰ Motion 14449

⁸¹ Motion 14449, Attachment A, 2015 Strategic Climate Action Plan, Goal Area 4: Consumption and Materials Management, Measure 1, Targets 1 and 2

challenges that have arisen due to increasing tonnage and the impacts of the China Sword restrictions, which affect approximately 14 percent of total recyclables.⁸²

Environmental Sustainability

As noted above, the CSWMP incorporates the SCAP's goals for recycling and resource recovery within the context of the transfer station network. It is not clear whether the targets identified in the SCAP will be achieved, particularly given the uncertainty in the recyclables market following China's recent restrictions. Because the policies and recommended actions in Chapter 5 are less directive than the SCAP targets, the Council may wish to undertake additional analysis of these targets when the SCAP is next updated.

Fiscal implications of policies

The transfer station network is supported through solid waste rates. Because most of the transfer network is already built out or is in the process of development (South County station), the only transfer station policy recommendation incorporated within the CSWMP that would affect rates is the decision about how to proceed with capacity in Northeast King County.

As noted earlier in this staff report, the Draft CSWMP analyzed three options for Northeast, and estimated a total cost per ton (including both capital and operating costs) in 2029:

- Houghton as is - \$2.39 cost per ton
- New Northeast station - \$13.11 cost per ton
- Combination approach - \$9.79 cost per ton

The transmitted CSWMP notes that only the new Northeast station option would meet all six key "level of service" criteria⁸³ and therefore recommends proceeding despite the higher cost per ton. The CSWMP sets the underlying policy recommendation to proceed with plans for the new station. The Council would have the opportunity to review specific impacts related to implementation of this recommendation through the budget process.

In addition, the restrictions imposed by China on recyclables could have fiscal impacts on the system, including declining revenues from recycling at transfer stations. These impacts are not yet known at this point.

Other issues for committee consideration

No issues identified.

⁸² Executive staff "Introduction to the 2019 Comprehensive Solid Waste Management Plan" presentation to the Regional Policy Committee on August 22, 2018 (2018-B0143)

⁸³ Key level of service criteria: time on site, recycling services offered, vehicle capacity, average daily handling capacity (tons), space for three days' storage, ability to compact waste

Chapter 6: Landfill Management and Solid Waste Disposal

Chapter 6 addresses the County's landfill management practices and solid waste disposal through policies and recommended actions focused around two themes:

- 1. Current disposal practices related to the Cedar Hills landfill and closed landfills:** Policies D-1, D-3, and Recommended Action 4-d support operating Cedar Hills and closed landfills to meet or exceed relevant laws and standards for the protection of public health and the environment, as well as investigating beneficial reuse options for closed landfills. Recommended Action 3-d provides for updating the Debris Management Plan in coordination with state and regional authorities.
- 2. Plans for long-term disposal:** Policies D-2 and D-4, and Recommended Action 1-d direct the County to maximize the capacity and lifespan of the Cedar Hills landfill through further development, and to plan for disposal after its ultimate closure to ensure no gap in service. However, Recommended Action 1-d proposes not specifying the next disposal method in this Plan. Recommended Action 2-d provides for continuing to evaluate disposal technologies and to regularly update the County's advisory committees.

Alternative Disposal Options Considered. The CSWMP also considered waste export and a waste to energy facility as alternative disposal methods when capacity at Cedar Hills is reached, currently projected in 2028 without further development.⁸⁴ SWD retained the services of Normandeau Associates to conduct a study on best fit technology and recommendations for a waste to energy facility given King County's waste projections and profile, as well as to evaluate out-of-county landfill options and rail capacity.⁸⁵ The staff report refers to this document as the "Normandeau study."

The alternative disposal options are briefly described below:

- *Waste Export.* Under this option, solid waste would be exported by rail to an out-of-county landfill similar to the City of Seattle and Snohomish County. The CSWMP indicates this option is not recommended because it has higher costs than further development of Cedar Hills, and requires modifying transfer stations to become "rail ready," making operational changes, and some lead time for contracting for services. It is unclear whether sufficient future rail capacity will be available in 2028 to accommodate the County's waste according to the Normandeau study, which reviewed the Washington State Freight Rail Plan. The Normandeau study noted that, "The lack of available capacity is likely to cause an increase in unit shipping costs that will need to be accurately modeled in the future, but is beyond the scope of this report."⁸⁶
- *Waste to Energy Facility.* Under this option in the CSWMP, the County's solid waste would be directed to a waste to energy facility (WTE) constructed in King

⁸⁴ Motion 15174, Attachment A, Cedar Hills Landfill Tonnage and Capacity Report, p. 2

⁸⁵ Normandeau Associates, Waste-to-Energy (WTE) Options and Solid Waste Export Considerations

⁸⁶ Normandeau study, p. xi

County that would reduce the waste to ash 90 percent by volume and 75 percent by weight.⁸⁷ Waste that can't be processed, called bypass waste, and ash would be transported to an out-of-county landfill by rail. The transmitted Plan notes that some costs could be offset through the sale of electricity and sale of recovered metals. The CSWMP indicates this option is not recommended because it has the highest costs and greenhouse gas emissions of the considered alternatives, and requires guaranteed amounts of consistent material for efficient operation. The transmitted Plan indicates that rail constraints could impact the export of the ash and bypass waste. The CSWMP estimates that a 5,000 tons per day facility would be needed to handle the County's projected waste tonnage and that at that size, the facility would be among the largest in the world. (For context, the solid waste system averaged 2,520 tons per day in 2018, according to Executive staff.)

Consistency with adopted policies and plans

Current disposal practices related to the Cedar Hills landfill and closed landfills. Policies D-1 and D-3, which call for operating the Cedar Hills and closed landfills to meet or exceed laws and standards around public health and environmental protection, are consistent with adopted policy. The current interlocal agreement signed by the 37 partner cities, and existing local, state, and federal law, require the County to meet relevant environmental and health standards for landfill operations.

Recommended Action 4-d, to explore beneficial reuse options for closed landfills is also consistent with previously adopted policy.⁸⁸

Recommended Action 3-d that supports coordinating with state and regional authorities to update the Debris Management Plan for King County is consistent with County policy. The King County Comprehensive Emergency Plan assigns the Department of Natural Resources and Parks with determining a plan for debris management in an emergency.

Plans for long-term disposal. Policy D-2 and the part of Recommended Action 1-d that supports maximizing the capacity and lifespan of the Cedar Hills landfill through further development are consistent with adopted policy and plans. Policy decisions over the last decade have been based on analysis indicating that keeping the landfill open as long as possible is the most economical alternative for waste disposal.

The County's 2007 Solid Waste Transfer and Waste Management Plan (2007 Transfer Plan) stated that, "extending the life of Cedar Hills is cost-effective for the region's ratepayers as well as the county," and recommended taking steps to extend the life of

⁸⁷ The Normandeau study identified a mass burn facility as the "best fit" waste to energy technology using the County's waste tonnage projections and waste profile, and a series of criteria. Mass burn is described in the Normandeau report as a facility where solid waste is fed to combustion units, energy is recovered, and combustion gases exiting the boiler are cleaned by an air pollution control system (p. 18-19). According to the study, mass burn is the most common WTE technology in North America, used at 64 of the 85 operating facilities in North America (p. 12).

⁸⁸ Ordinance 14236, Attachment A (2001 Comprehensive Solid Waste Management Plan), Policy DSW-

the landfill for as long as possible subject to environmental constraints, relative costs to operate, and stakeholder interests.⁸⁹

Policy D-4, which supports not siting a replacement landfill in King County is consistent with previously adopted policy.⁹⁰ The transmitted CSWMP cites land availability, environmental considerations, public acceptance, and cost as impediments to siting a replacement landfill in King County and the reasons it was not considered.

Recommended Actions 1-d and 2-d support not specifying the next disposal method after Cedar Hills reaches capacity and closes in order to account for technological advances, and instead calls for tracking and evaluating other disposal technologies for future feasibility. This represents a departure from adopted County policy, which expresses an intent to initiate waste export as the next disposal method.

During the development of the 2001 Comprehensive Solid Waste Plan, the County evaluated a range of options for disposal of the region's waste following Cedar Hills' ultimate closure including waste export, construction of a new publically owned landfill in another county, and construction of an incinerator. At the time, waste export was considered to be the lowest cost alternative of those considered. The 2001 CSWMP contained a series of policies establishing waste export as the County's next disposal method and also directed the Executive to develop and transmit to the Council a waste export implementation and coordination plan. The latter requirement was satisfied with the transmittal of the 2007 Transfer Plan.⁹¹ The 2007 Transfer Plan, in addition to making recommendations on the configuration of the County's transfer network, also made recommendations on long-haul transport options (rail, barge, or truck), intermodal facilities,⁹² and the possibility of early waste export.

Regardless of the disposal option selected following the closure of Cedar Hills, the current interlocal agreements with the partner cities require the County to engage with the advisory committees⁹³ at least seven years before the projected closure date on the next disposal method to be used, the associated changes to the solid waste system, and estimated costs.⁹⁴

Environmental Sustainability

As noted previously throughout the staff report, significant greenhouse gas emissions are associated with consumption and waste disposal. According to the County's Strategic Climate Action Plan (SCAP), methane from landfills and combustion of diesel and gasoline fuel by fleet vehicles are two of the major sources of greenhouse gas emissions from King County government operations.⁹⁵

⁸⁹ Ord. 15979, Attachment A (2007 Solid Waste Transfer and Waste Management Plan), p. 13

⁹⁰ Ord. 14236, Attachment A (2001 Comprehensive Solid Waste Management Plan)

⁹¹ Ord. 15979, Attachment A (2007 Solid Waste Transfer and Waste Management Plan)

⁹² Per the 2007 Transfer Plan, "An intermodal facility is a location where cargo, in this case solid waste, is transferred from one mode of transport to another. Sealed waste containers are trucked to an intermodal facility and lifted onto rail cars or barges" (p. 44)

⁹³ Solid Waste Advisory Committee and the Metropolitan Solid Waste Management Advisory Committee

⁹⁴ Amended and Restated Solid Waste Interlocal Agreement, Section 5.1

⁹⁵ Motion 14449, Attachment A (Strategic Climate Action Plan – November 2015)

Comparative Greenhouse Gas Emissions from Disposal Options. The CSWMP compares estimated greenhouse gas emissions for each of the three disposal options that were considered.

The transmitted Plan provides estimates using two modeling tools developed by the U.S. Environmental Protection Agency, the Waste Reduction Model (WARM) and the Electronic Greenhouse Gas Reporting Tool (eGGRT). According to the CSWMP, the tools provide different types of estimates and have different advantages and disadvantages. The WARM tool estimates the relative lifecycle greenhouse gas emissions associated with disposal options using a profile of disposed materials and answers the question: Which of the disposal options result in the lowest relative lifecycle greenhouse gas emissions accounting for both emissions and offsets? The eGGRT tool creates an estimate of emissions from a specific facility in a given year and answers the question: What are the emissions from historically disposed materials at my landfill (or other disposal method) this year? The greenhouse gas emissions estimates included in the CSWMP are given in metric tons of carbon dioxide equivalents and recreated in Table 1.⁹⁶

Table 1. Greenhouse Gas Emissions Estimates for Three Disposal Options

GHG Emission Model	Further Develop Cedar Hills	Waste Export to an Out-of-County Landfill	Waste to Energy Facility
Life Cycle Greenhouse Gas Emissions (WARM)	(134,000) MTCO ₂ e	(78,000) MTCO ₂ e	12,000 to 80,000 MTCO ₂ e
Annual Greenhouse Gas Emissions (eGGRT)	91,000 MTCO ₂ e/year	91,000 MTCO ₂ e/year	1,200,000 MTCO ₂ e/year

Comparative Recycling Impacts of Disposal Options. The CSWMP also provides the estimated impact on the County's recycling rate for each of the three disposal options considered.⁹⁷ With both the Cedar Hills and waste export options, no change in the recycling rate is anticipated according to the transmitted Plan. The waste to energy option is expected to increase the recycling rate by two percent through the recovery of metals after the waste is burned.

Fiscal implications of policies

The disposal of solid waste is supported through solid waste rates. In the transmitted Plan, the policy and recommended action that impacts solid waste rates the most are those relating to long term disposal. The transmitted Plan recommends that the County maximize the capacity and lifespan of Cedar Hills through further development (Policy D-2; Recommended Action 1-d), as opposed to the other considered alternatives.

The transmitted Plan sets the underlying policy recommendation to proceed with plans to further develop the Cedar Hills landfill, indicating that it has the lowest rate impact of the considered alternatives, the lowest greenhouse gas emissions, and the lowest risk

⁹⁶ CSWMP, Page 6-6

⁹⁷ CSWMP, Page 6-6

due to the County's experience in landfill operation. The CSWMP outlines increasing landfill capacity and density⁹⁸ through diversion efforts, continuing operational efficiencies, and through new area development within the existing landfill footprint and raising the permitted height. According to Executive staff, the design and capacity of the area development is subject to engineering and design work that would occur following adoption of the CSWMP and approval of any necessary budget appropriations. Executive staff indicate that a refined Site Development Plan would be developed in further detail so that the development options can be narrowed to the most favorable two or three alternatives that would then be evaluated through State Environmental Policy Act (SEPA) review.

The estimated fiscal implications of expanding Cedar Hills and the considered alternatives are further described below. All figures should be considered planning-level estimates that could be subject to change should any relevant assumptions change. Note that the transmitted Plan sets the underlying policy recommendation to proceed with plans to further develop the Cedar Hills landfill, but that specific appropriations would be addressed during the budget process. Due to the different possible service periods with each option and the various assumptions, the figures are intended to provide a general sense of the magnitude of key fiscal implications, but not to provide an apples-to-apples comparison.

Estimated Initial Capital Costs. Executive staff provided estimated capital costs to further develop Cedar Hills (new area development and closure) ranging from \$206 million to \$505 million (in 2015 dollars), which includes various options from the Cedar Hills Site Development Alternatives Final Report (Site Development Alternatives Report) and other scenarios developed internally by SWD.⁹⁹ The draft CSWMP¹⁰⁰ released for public comment earlier this year identified an estimated initial capital cost of \$241 million (in 2017 dollars) for one possible development scenario that would yield an estimated 12 years of additional landfill capacity. As the transmitted Plan notes, another disposal option would be needed following the ultimate exhaustion of Cedar Hills capacity. The transmitted CSWMP does not include cost estimates for this additional disposal option. Policy makers may wish to pursue additional analysis on long-term disposal options if more information about cost estimates is desired.

The draft CSWMP also provided estimated initial capital costs for the waste export and waste to energy alternatives. For waste export, approximately \$4.6 million would be needed to purchase trailers for rail containers (in 2017 dollars). Under the waste to energy option, the initial capital cost was estimated to be approximately \$1.1 billion based on the Normandeau study. This capital cost assumed construction of a 4,000 tons per day facility¹⁰¹ based on a forecast of 1.1 million tons in 2028 and 2.18 million tons in 2078, and a 57 percent recycling rate throughout the planning horizon. The

⁹⁸ Density in this capacity refers to how tightly solid waste materials are packed into a given amount of space in the landfill and is a function of operational practices (e.g., compaction), the types of waste, and natural processes (e.g., natural settling as solid waste decomposes) (CSWMP, Page 6-1)

⁹⁹ The Site Development Alternatives Report was prepared for SWD by an outside consulting team in June 2016, but was not transmitted to Council for review or adoption.

¹⁰⁰ Draft Comprehensive Solid Waste Management Plan – January 2018

¹⁰¹ The Normandeau study considered two strategies in the sizing of the WTE facility: (1) sizing the WTE facility to maximize available capacity at the outset, with future additions to increase capacity as needed; and (2) sizing the WTE facility bigger than necessary at the outset to minimize bypass waste.

transmitted CSWMP indicates that a 5,000 tons per day facility would be needed, which may impact the estimated capital cost figure cited above. Executive staff note that an updated tonnage forecast done in 2018 showed that in 2048, a facility that could process 5,000 tons per day would be needed.

Estimated Disposal Cost per Ton and Rate Impacts. The transmitted CSWMP indicates that, should the County further develop Cedar Hills, the estimated disposal cost per ton is \$41 per ton in 2029 dollars, compared to \$55 per ton for waste export, and \$136 per ton for waste to energy (based on 5,000 tons per day facility). Executive staff note that these figures are not additive to the solid waste rate (or “tipping fee”), but instead represents the disposal cost *portion* of the tipping fee.

Further information provided by Executive staff in a recent committee presentation¹⁰² shows an estimated tipping fee in 2029 of \$172 per ton for expanding Cedar Hills, \$182 per ton for waste export, and \$230 per ton for waste to energy. The provided information also indicated that in 2029, the estimated curbside customer impact per month would be approximately \$9.20 for expanding Cedar Hills, \$9.30 for waste export, and \$11.31 for waste to energy (in 2029 dollars). By 2040, Executive staff anticipate the monthly impact to grow to \$12 per month for both the expanding Cedar Hills and waste export options, and \$16 per month for waste to energy.

Estimated Annual Operating Costs. The draft CSWMP released for public comment earlier this year provided estimated annual revenues and annual operating costs provided in 2017 dollars. If Cedar Hills was further developed, the draft CSWMP estimated the annual operating costs to be \$20 million in 2028 (including post-closure maintenance costs assuming closure in 2040). The draft CSWMP estimated the annual operating costs for waste export at \$43 million in 2028 and for waste to energy at \$41 million in 2028 (in 2017 dollars).

For the Cedar Hills expansion option, operating costs may be partially offset by revenue from the sale of converted landfill gas to Puget Sound Energy estimated at \$1 to \$3 million annually (in 2017 dollars). With a waste to energy facility, the sale of generated electricity and recovered metals may generate an estimated \$27 to \$41 million annually (in 2017 dollars). Executive staff indicate that revenue from a waste to energy facility will increase year-over-year because of the tonnage increases each year. The draft CSWMP indicates an estimated total revenue of \$700 million over a twenty year period for waste to energy. Under the waste export option, the draft CSWMP notes that revenue sharing could be negotiated for the energy harvested from landfill gas in an out-of-county landfill.

Estimated Service Period. Depending on the specific development option(s) selected, Executive staff indicate that, based on the Site Development Alternatives Report and internal analysis, the Cedar Hills estimated closure date could range from 2035 to 2050 with further development. They further note that factors outside of additional capacity developed at the landfill will impact closure, including annual tonnage received and increases in recycling rates. As noted previously, the draft CSWMP identifies one

¹⁰² Executive staff “Introduction to the 2019 Comprehensive Solid Waste Management Plan” presentation to the Regional Policy Committee on August 22, 2018 (2018-B0143)

possible development scenario that would yield an estimated 12 years of additional landfill capacity (2028-2040).

For the waste export option, the transmitted CSWMP notes that five out-of-county landfills have capacity beyond the year 2100, according to the Normandeau study. However, as previously discussed, access to these landfills may be constrained by rail capacity.

The draft CSWMP used a 20-year planning horizon for the waste to energy option (2028-2048), indicating that under current projections additional capacity would be needed after 2048. It should be noted that it is possible a waste to energy facility could operate beyond that period. According to the Normandeau study, 80 of the 85 facilities operating in North America were built prior to 2000 and two of the earliest facilities in the United States were built in the 1970s and are still operating today.

Other issues for committee consideration

The biennial budget included a linked proviso and expenditure restriction that requires that \$500,000 from the Solid Waste Division budget be used for the Office of Performance, Strategy and Budget to manage a RFP process and consultant study concerning long-term disposal options. The scope of work described in the proviso is primarily focused on the feasibility of a waste to energy facility, but also requires the consultant to review the County's most recent waste tonnage forecast and discuss the potential costs, constraints, and environmental impacts of waste export by rail. The waste to energy portion of the study shall contain an evaluation of the size of facility that would be needed, estimates of the costs and potential financing options, potential environmental impacts, estimates of potential revenues, and a reasonable timeline for implementation.

The Executive is expected to file the consultant study with the Council around October 4, 2019.

The expenditure restriction and proviso state:

ER2 EXPENDITURE RESTRICTION:

Of this appropriation, \$500,000 shall be expended or encumbered solely to issue a request for proposals, and to manage and pay a contractor to conduct the feasibility study for a waste to energy facility to manage the region's solid waste that provides a comparison to waste export by rail as described in Proviso P4 of this section.

P4 PROVIDED FURTHER THAT:

Of this appropriation, \$100,000 shall not be expended or encumbered until the executive transmits the feasibility study for a waste to energy facility to manage the region's solid waste that provides a comparison to waste export by rail and a motion that should acknowledge receipt of the feasibility study and reference the subject matter, the proviso's ordinance, ordinance section and proviso number in both the title and body of the motion and a motion acknowledging receipt of the feasibility study is passed by the council. The study should be performed by a

contractor with significant experience in the field of waste management and recycling, demonstrated expertise with waste to energy technology and familiarity with the capital and operating needs of waste to energy facilities located around the world, and shall primarily consider a waste to energy facility that uses mass burn technology. The contractor may also identify other technologies that may be feasible to accommodate the current and future projections for the amount and composition of the county's waste stream. The solid waste division must provide the county's waste tonnage forecast model to the contractor upon request and explain any assumptions.

The feasibility study shall include, but not be limited to:

A. A review of factors that may affect the county's future waste tonnage forecast completed in 2018, and an analysis, with a range of estimates, of how different assumptions could affect the forecast;

B. A discussion of the potential for exporting the county's waste by rail that includes an analysis of the future rail capacity forecast, the estimated capital and operating costs and the environmental impacts;

C. An evaluation of the size of a waste to energy facility that would be needed to accommodate the county's solid waste over a twenty to fifty year time horizon, beginning in 2025, with any assumptions clearly articulated, and a description of any siting needs including the necessary parcel size;

D. A discussion of the costs of a waste to energy facility and potential financing options that includes estimates for the capital costs, the annual operating and maintenance costs and the estimated impact on the county's tipping fee, with any assumptions clearly articulated;

E. A discussion of any environmental impacts of a waste to energy facility;

F. An assessment of regional electricity markets and the regulatory structure to produce an estimate of potential revenues from the sale of electricity by a waste to energy facility;

G. An analysis of other potential revenue sources from the potential byproducts of a waste to energy facility that includes, but is not limited to, the sale of recovered metals and possible uses of bottom ash;

H. A discussion of the state and federal regulatory environment related to waste to energy facilities; and

I. A reasonable timeline for implementation of a waste to energy facility, and an analysis of the potential impact on the lifespan and capacity of the Cedar Hills regional landfill if a waste to energy facility was developed according to this timeline.

The executive should file the feasibility study and a motion required by this proviso by October 4, 2019, in the form of a paper original and an electronic copy with the clerk of the council, who shall retain the original and provide an electronic copy to all councilmembers, the council chief of staff and the lead staff for the committee of the whole, or its successor.

Chapter 7: Solid Waste System Finance

Chapter 7 addresses how the solid waste system is financed through policies and recommended actions focused around two themes:

- 1. Assessing Customer Fees:** Policy F-1 supports keeping fees as low as reasonable while covering the costs of the system and upholding system priorities, and managing rates through smaller, more frequent increases (Recommended Action 11-f). Other recommended actions address where and how fees are assessed (Recommended Actions 1-f (A), 1-f (B)). Recommended Action 4-f calls for the consideration of alternatives to the current rate

methodology and the remaining recommended actions relate to the potential evaluation of various customer classes (Recommended Action 3-f, 5-f, 6-f).

2. **Broader Financial Planning and Use of Fee Revenues:** Several of the recommended actions relate to the management and use of specific reserves and funds, and the possible establishment of an Environmental Reserve Fund (Recommended Actions 1-f (J); 1-f (K); 1-f (L); 8-f; 9-f; 10-f). Other recommended actions address the financing and use of solid waste system assets, and any associated mitigation efforts (Recommended Actions 1-f (C), 1-f (D), 1-f (F), 1-f (G), 1-f (H)). The remaining recommended actions broadly address financial monitoring (Recommended Actions 1-f (E), 1-f (I), 2-f, 7-f).

NOTE: In the transmitted Plan, Recommended Action 1-f directs the County to adopt a series of Division financial policies, and includes a bulleted list. As noted in the section of the staff report discussing Proposed Ordinance 2018-0375, the bulleted items would be codified in K.C.C. Title 10. For ease of reference, the bulleted items have been assigned letters according to the letters in the Proposed Ordinance (see below). Recommended Actions 2-f through 11-f in this chapter are not proposed to be codified in the proposed ordinance as transmitted.

Recommended Action 1-f: Adopt the following as division policies:

- (A) Assess fees for use of the solid waste transfer and disposal system at the point of service.
- (B) 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, and to address low income needs.
- (C) Utilize the assets of the King County Solid Waste Division consistent with the conditions established in the Amended and Restated Solid Waste Interlocal Agreement with the cities.
- (D) The County General Fund will not charge use fees or receive other consideration from the Solid Waste Division 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.
- (E) Maintain reserve funds and routinely evaluate the funds for long-term adequacy and set contributions to maintain reasonable rate stability.
- (F) 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.
- (G) Use solid waste fees to fund mitigation payments to cities for impacts directly attributable to solid waste facilities per Revised Code of Washington 36.58.080 and the Amended and Restated Solid Waste Interlocal Agreement.

- (H) Use solid waste fees to fund required mitigation for solid waste facilities, including mitigation mandated by federal, state, and local regulations and permits.¹⁰³
- (I) Continue to evaluate and implement fiscally responsible operational changes to support a sustainable business model and maintain the assets of the solid waste facilities.
- (J) Include a target fund balance in the Solid Waste Division financial plan equal to at least 30 days of operating expenses.
- (K) Establish a minimum balance in the Rate Stabilization Reserve to mitigate the risks associated with a moderate-level economic recession.
- (L) Maintain the Landfill Post-Closure Maintenance Fund at a level to ensure that environmental monitoring and maintenance of the closed landfills will be fully funded through the end of their regulated post-closure maintenance periods, as defined by applicable law.

Consistency with adopted policies and plans

Assessing Customer Fees. The policy and recommended actions that support the use of tipping fees to cover the costs of the system, assessing fees at the point of service, and exploring the use of customer classes are consistent with adopted policies (Policy F-1; Recommended Actions 1-f (A), 3-f, 5-f, 6-f). The ILAs with the partner cities affirm the County's authority to adopt, by ordinance, the rates necessary to recover all costs of the system and to establish classes of customers for solid waste services along with the associated fees. Additionally, the Council passed Ordinance 18784 in September 2018 establishing a low-income discount program for customers living in households at or below 200 percent of the federal poverty level.¹⁰⁴ Additionally, King County Code¹⁰⁵ states that solid waste service fees shall be collected at the time of use, with some limited exceptions as expressly provided in code.

Executive staff indicate that Recommended Actions 4-f and 11-f, which suggest consideration of alternatives to the current rate structure and for managing solid waste rates through smaller and more regular increases, respectively, are new approaches for the solid waste system. However, it should be noted that neither of these represent a specific proposal and these recommended actions are not proposed to be codified under PO 2018-0375. Modifications to the current rate structure, as well as future rate increases, would require Council authorizing legislation.

Broader Financial Planning and Use of Fee Revenues. Recommended actions governing the management and use of specific reserves and funds, as well as supporting the consideration of an Environmental Reserve Fund, are consistent with adopted policy. A more detailed discussion of policy consistency broken out by the individual reserves and funds is found below:

¹⁰³ NOTE: This policy was included in the transmitted ordinance and would be codified with the rest of this list, but Executive staff note that this language was inadvertently omitted from the transmitted Plan.

¹⁰⁴ PO 2018-0311 received a due pass recommendation from the Budget and Fiscal Management Committee and is tentatively scheduled to be on the full Council agenda on September 10, 2018.

¹⁰⁵ K.C.C. 10.12.030

- *Rainy Day Reserve.* Recommended Action 1-f (J) is consistent with the County Comprehensive Financial Policies,¹⁰⁶ which specify that the majority of operating funds should maintain a Rainy Day Reserve equal to 30-60 days of expenditures.
- *Rate Stabilization Reserve.* Recommended Actions 1-f (K) and 9-f are consistent with the County Comprehensive Financial Policies,¹⁰⁷ which note that rate stabilization reserves set aside fund balance to minimize rate, fee, or revenue increases needed in future years to provide the current level of service. Additionally, Attachment A to Proposed Ordinance 2018-0311,¹⁰⁸ currently under review by the Council would propose maintaining a minimum balance equal to five percent of projected disposal revenues in a given year to help stabilize operations if a moderate economic recession occurs during the rate period.
- *Landfill Reserve Fund, Landfill Post-Closure Maintenance Fund, Capital Equipment Recovery Fund, and Construction Fund.* Recommended Action 10-f is consistent with King County Code,¹⁰⁹ which establishes these funds and outlines the allowable expenditures. Recommended Action 1-f (L) calls for maintaining the Landfill Post-Closure Maintenance Fund to be funded at a sufficient level to ensure that monitoring and maintenance of closed landfills will be fully funded through the post-closure period is also consistent with adopted policy. King County Code¹¹⁰ requires the solid waste system to set aside reserve moneys for closure and post-closure maintenance as a financially self-supporting utility.
- *Environmental Reserve Fund.* Recommended Action 8-f, which addresses the possible creation of an Environmental Reserve Fund with revenue from solid waste fees for the benefit of the County and partner cities, is consistent with adopted policy. The ILAs with the partner cities note that both the County and Cities agree that system costs including environmental liabilities should be funded by system revenues and establish a protocol for the designation and distribution of funding for potential future environmental liabilities.

The recommended actions that relate to the financing and use of solid waste system assets such as transfer stations, as well as mitigation payments related to solid waste facilities, are consistent with adopted policy (Recommended Actions 1-f (C), 1-f (D), 1-f (F), 1-f (G), 1-f (H)). The ILAs with the partner cities provide that the County general fund shall not charge use fees for transfer facility property, but will charge rent for use of the Cedar Hills landfill since it is a general fund asset. Furthermore, the ILAs also establish a process for identifying and mitigating the impacts attributable to solid waste facilities for host cities and neighboring communities.

The remaining recommended actions broadly address financial monitoring and include: maintaining a financial forecast and cash-flow projection (Recommended Action 2-f);

¹⁰⁶ Motion 14803

¹⁰⁷ Motion 14803

¹⁰⁸ PO 2018-0311 received a due pass recommendation from the Budget and Fiscal Management Committee and is tentatively scheduled to be on the full Council agenda on September 10, 2018.

¹⁰⁹ K.C.C. 4A.200.390 (Landfill Reserve Fund); K.C.C. 4A.200.710 (Landfill Post-Closure Maintenance Fund); 4A.200.680 (Capital Equipment Recovery Fund); 4A.200.690 (Construction Fund)

¹¹⁰ K.C.C. 10.04.105

exploring new revenue sources (Recommended Action 7-f); maintaining and evaluating reserve fund for long-term adequacy (Recommended Action 1-f (E)); and continuing the evaluation and implementation of fiscally responsible operational changes (Recommended Action 1-f (I)).

Environmental Sustainability

Given the focus of this chapter on solid waste system financing, no environmental sustainability impacts have been identified for these policies and recommended actions.

Fiscal implications of policies

No additional fiscal implications for the policies and recommended actions in this chapter have been identified due to the fact that the majority of policies memorialize existing solid waste system practice. As noted previously, while Recommended Actions 4-f and 11-f represent new approaches for the system, the actions themselves cannot be operationalized without separate Council authorization.

ATTACHMENTS

1. [Omitted]
2. Transmittal Letter
3. Revised Fiscal Note
4. SWAC Advisory Note
5. MSWMAC Advisory Note
6. List of Policies, Goals, and Recommended Actions in Transmitted Plan

INVITED

1. Pat McLaughlin, Director, Solid Waste Division, Department of Natural Resources and Parks

July 26, 2018

The Honorable Joe McDermott
Chair, King County Council
Room 1200
C O U R T H O U S E

Dear Councilmember McDermott:

This letter transmits the 2019 Comprehensive Solid Waste Management Plan (Comp Plan) with a motion required by Ordinance 18409 Section 107, Proviso P1, and an Ordinance to approve the Comp Plan and associated changes to King County Code (KCC) Title 10. The Comp Plan will provide long term policy to guide the regional solid waste system for the next 20 years.

As amended by the ordinance introduced as Proposed Ordinance 2018-0267 (the Third Omnibus Budget Ordinance), Ordinance 18409, Section 107, Proviso P1, will require the Comp Plan to be transmitted by July 26, 2018.

The Comp Plan includes a range of strategies to address recycling, waste disposal, and transfer services provided by public and private participants in the regional system.

Specifically, the Comp Plan will set policy for the following:

- The Existing System: stakeholder involvement, equity, climate change.
- Forecasting and Data: forecasting, tracking progress, establishing trends.
- Sustainable Materials Management: waste prevention and reduction, recycling.
- Solid Waste Transfer and Processing System: service levels, Northeast area facilities.
- Landfill Management and Solid Waste Disposal: waste disposal, closed landfills.
- Solid Waste System Finance: efficient and responsible financial management.

The Comp Plan also furthers the goals of key County plans and initiatives as follows:

- The Comp Plan furthers the King County Strategic Plan goal of aligning King County and community priorities through solid waste policies developed in coordination with our community partners.

The Honorable Joe McDermott

July 26, 2018

Page 2

- The Comp Plan furthers the King County Equity and Social Justice Initiative goal of investing in community partnerships by engaging the public in the planning process and ensuring services are distributed equitably.
- The Comp Plan furthers the Strategic Climate Action Plan green building and recycling goals through policies and actions to support those goals and by choosing actions with lower greenhouse gas emissions.
- The legislation implements the Rural Economic Strategies Plan and benefits unincorporated area residents through policy guidance for solid waste services that support the rural economy.

In developing the Comp Plan, the Department of Natural Resources and Parks (DNRP) engaged with the public, 37 partner cities, and unincorporated area residents during a two-month-long public review period with public meetings, website information and other means of engagement. DNRP worked to incorporate public input as well as input gathered during nearly two years of discussions with the Solid Waste Advisory Committee and Metropolitan Solid Waste Management Advisory Committee into the Comp Plan.

It is estimated that the Comp Plan required over 6000 staff hours to produce, costing approximately \$400,000. The estimated printing cost for this report is approximately \$25 per copy.

Thank you for your consideration of this Comp Plan and associated legislation. This important legislation will help King County residents plan for efficient, cost effective, and environmentally sound solid waste management for the next 20 years. If you have any questions, please feel free to contact Pat D. McLaughlin, Division Director of the Solid Waste Division of the Department of Natural Resources and Parks, at 206-477-4501.

Sincerely,

Dow Constantine
King County Executive

Enclosure

cc: King County Councilmembers
ATTN: Carolyn Busch, Chief of Staff
Melani Pedroza, Clerk of the Council
Dwight Dively, Director, Office of Performance, Strategy and Budget
Christie True, Director, Department of Natural Resources and Parks (DNRP)
Pat D. McLaughlin, Division Director, Solid Waste Division, DNRP

2017/2018 FISCAL NOTE

Ordinance/Motion: 2018-XXXX
 Title: 2019 Comprehensive Solid Waste Management Plan
 Affected Agency and/or Agencies: Solid Waste Division, Department of Natural Resources and Parks
 Note Prepared By: Meg Moorehead, Strategy, Communications, & Performance Manager, Solid Waste Division
 Date Prepared: May 24, 2018
 Note Reviewed By:
 Date Reviewed:

Description of request:

Revenue to:

Agency	Fund Code	Revenue Source	2017/2018	2019/2020	2021/2022
TOTAL			0	0	0

Expenditures from:

Agency	Fund Code	Department	2017/2018	2019/2020	2021/2022
TOTAL			0	0	0

Expenditures by Categories

	2017/2018	2019/2020	2021/2022
TOTAL	0	0	0

Does this legislation require a budget supplemental?

Notes and Assumptions:

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SWAC

Solid Waste Advisory Committee

King Street Center · 201 South Jackson Street, Suite 701 · Seattle, WA 98104-3855

July 20, 2018

To: King County Executive Dow Constantine
 King County Councilmember Rod Dembowski
 King County Councilmember Larry Gossett
 King County Councilmember Kathy Lambert
 King County Councilmember Jeanne Kohl-Welles
 King County Councilmember Dave Upthegrove
 King County Councilmember Claudia Balducci
 King County Councilmember Pete Von Reichbauer
 King County Councilmember Joe McDermott
 King County Councilmember Reagan Dunn

CC: Christie True, DNRP Director
 Pat McLaughlin, Solid Waste Division Director

RE: ADVISORY NOTE ON THE COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN

Please accept this advisory note, as approved by unanimous vote of members of the Solid Waste Advisory Committee ("SWAC") on July 20, 2018, as SWAC's formal support of the Comprehensive Solid Waste Management Plan ("Comprehensive Plan") to be transmitted to the Metropolitan King County Council ("MKCC") for its consideration.

SWAC supports the policies, goals, and actions in the plan and requests that the MKCC, in its deliberations, recognize that our Comprehensive Plan was developed through a transparent, collaborative, thorough, and credible process. In partnership with the King County Solid Waste Division and stakeholders, the Solid Waste Advisory Committee members spent the last two years collaboratively and exhaustively reviewing, discussing, and helping to craft elements, data, language, and implications of the plan. The plan was also informed and influenced by a preliminary city review period, a robust and accountable public review and comment process, and a Department of Ecology review.

Furthermore, we respectfully request that the MKCC formally approve the Comprehensive Plan without any substantial modification to the text and policies, goals, and actions contained therein. We believe that King County Executive's recommendations in our plan, particularly those with regard to the siting and construction of a Northeast Recycling and Transfer Station and the maximization of the capacity at the Cedar Hills Regional Landfill, as a next step, reflect the collective opinion of the committee members and, as such, this consensus should carry significant weight in the MKCC's deliberations when considering approval of the plan.

We thank the MKCC for the leadership it has shown in encouraging the completion of the Comprehensive Plan and look forward to the upcoming approval process following the MKCC's approval of the plan.

Signed on behalf of SWAC,

A handwritten signature in black ink, appearing to read 'Kevin Kelly', written in a cursive style.

Kevin Kelly
Chair, Solid Waste Advisory Committee
Recology

A handwritten signature in black ink, appearing to read 'April Atwood', written in a cursive style.

April Atwood
Vice Chair, Solid Waste Advisory Committee

MSWMAC

Metropolitan Solid Waste Management Advisory Committee

King Street Center • 201 South Jackson Street, Suite 701 • Seattle, WA 98104-3855

July 19, 2018

To: King County Executive Dow Constantine
 King County Councilmember Rod Dembowski
 King County Councilmember Larry Gossett
 King County Councilmember Kathy Lambert
 King County Councilmember Jeanne Kohl-Welles
 King County Councilmember Dave Upthegrove
 King County Councilmember Claudia Balducci
 King County Councilmember Pete Von Reichbauer
 King County Councilmember Joe McDermott
 King County Councilmember Reagan Dunn

CC: Christie True, DNRP Director
 Pat McLaughlin, Solid Waste Division Director

RE: ADVISORY NOTE IN SUPPORT OF THE COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN

Please accept this advisory note from the Metropolitan Solid Waste Management Advisory Committee ("MSWMAC") in support of the draft Comprehensive Solid Waste Management Plan ("Comprehensive Plan") to be transmitted to the Metropolitan King County Council ("MKCC") for its consideration.

MSWMAC strongly supports the policies, goals, and actions in the plan and requests that the MKCC, in its deliberations, recognize that our Comprehensive Plan was developed through a transparent, collaborative, and credible process and, accordingly, substantially reflects the will of the majority of the cities to which King County provides transfer and disposal services. In partnership with the King County Solid Waste Division, the Solid Waste Advisory Committee, and stakeholders, MSWMAC members spent the last two years collaboratively and exhaustively reviewing, discussing, and crafting all elements, data, language, and implications of the plan. The plan was also informed and influenced by a preliminary city review period, a robust and accountable public review and comment process, and a Department of Ecology review.

Furthermore, we respectfully request that the MKCC formally approve the Comprehensive Plan without any substantial modification to the policies, goals, and actions contained therein. We believe that King County Executive's recommendations in our plan, particularly those with regard to the siting and construction of a Northeast Recycling and Transfer Station and the maximization of the capacity at the Cedar Hills Regional Landfill, are substantially supported by MSWMAC and, as such, this consensus should carry significant weight in the MKCC's deliberations when considering approval of our plan.

We thank the MKCC for the leadership it has shown in encouraging the completion of the Comprehensive Plan and look forward to the upcoming city approval process following the MKCC's approval of the plan.

Signed on behalf of MSWMAC,

Member cities

Algona • Auburn • Bellevue • Black Diamond • Bothell • Burien • Clyde Hill • Covington • Des Moines • Enumclaw • Federal Way • Issaquah • Kenmore • Kent • Kirkland • Lake Forest Park • Maple Valley • Mercer Island • Newcastle • Normandy Park • Redmond • Renton • Sammamish • SeaTac • Shoreline • Snoqualmie • Tukwila • Woodinville

Penny Sweet

**Penny Sweet
Chair, Metropolitan Solid Waste Management Advisory Committee
Councilmember, City of Kirkland**

Linda Knight

**Linda Knight
Vice-Chair, Metropolitan Solid Waste Management Advisory Committee
Solid Waste Coordinator, City of Renton**

**Transmitted 2019 Comprehensive Solid Waste Management Plan (PO 2018-0375)
List of Policies, Recommended Actions, and Goals**

Chapter		#	Text of Policy / Recommended Action
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, 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.
		ES-4	Consider climate change impacts and sustainability when planning for facilities, operations, and programs.
	Recommended Actions	-	None
3 – Forecasting and Data	Policies	FD-1	Monitor and report the amount, composition, and source of solid waste entering the transfer and disposal system.
		FD-2	Update the solid waste tonnage forecast to support short- and long-term planning and budgeting for facilities and operations.
		FD-3	Monitor and report waste prevention and recycling activity, including the amount of materials recycled, programmatic achievements, and the strength of commodity markets.
		FD-4	Continue to monitor new and emerging technologies to identify opportunities for their use in managing solid waste and recyclables.
	Recommended Actions	1-fd	Standardize the sampling methodology and frequency in tonnage reports submitted to the division and the cities by the collection companies to improve data accuracy.
		2-fd	Perform solid waste, recycling, organics, and construction and demolition characterization studies at regular intervals to support goal development and tracking.
		3-fd	Monitor forecast data and update as needed.
		4-fd	Develop voluntary agreements with recycling companies that will improve data reporting and resolve data inconsistencies.

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Chapter		#	Text of Policy / Recommended Action
4 – Sustainable Materials Management	Goal	-	Achieve Zero Waste of Resources – to eliminate the disposal of materials with economic value – by 2030, with an interim goal of 70 percent recycling through a combination of efforts in the following order of priority: a. Waste prevention and reuse, b. Product stewardship, c. Recycling and composting, and d. Beneficial use.
	Policies	S-1	Set achievable targets for reducing waste generation and disposal and increasing recycling and reuse.
		S-2	Enhance, develop, and implement waste prevention and recycling programs that will increase waste diversion from disposal using a combination of tools: a. Infrastructure, b. Education and promotion, c. Incentives, d. Mandates, e. Enforcement, and f. Partnerships.
		S-3	Advocate for product stewardship in the design and management of manufactured products and greater responsibility for manufacturers to divert these products from the waste stream.
		S-4	Prevent waste generation by focusing on upstream activities, including encouraging sustainable consumption behaviors, such as buying only what one needs, buying durable, buying secondhand, sharing, reusing, repairing, and repurposing.
		S-5	Work with regional partners to find the highest value end uses for recycled and composted materials, support market development, and develop circular supply loops to serve production needs.

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Chapter	#	Text of Policy / Recommended Action
4 – Sustainable Materials Management (cont.)	Policies (cont.)	S-6 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-7 Provide for efficient collection of solid waste, recyclables, and organics, while protecting public health and the environment, promoting equitable service, and maximizing the diversion of recyclables and organics from disposal.
		S-8 Promote efficient collection and processing systems that work together to minimize contamination and residual waste, maximize diversion from disposal, and provide adequate capacity.
	Recommended Actions (Regional Leadership)	1-s Lead by example by improving waste prevention and recycling in public-sector operations, facilities, and at sponsored events, as well as through the purchase of sustainable products.
		2-s Form a regional responsible recycling forum to work with public and private partners to address production, use, and end-of-life management of goods. The forum will identify ways to strengthen recyclables markets, reduce contamination, and improve the quality and quantity of recyclable materials through more uniform city/county recycling approaches, education and outreach, and other means.
	Recommended Actions (Education, Outreach, and Technical Assistance)	3-s Provide regional education outreach support and incentive programs to overcome barriers for residents and businesses to effectively prevent waste. Emphasize the primary importance of purchase and product use decisions that prevent waste, and secondary importance of recycling items/materials that couldn't be prevented. Work in partnership with other governments, non-governmental organizations, and the private sector to maximize the effectiveness of these efforts.
		4-s Provide waste prevention and recycling education programs in schools throughout the county, and help schools and school districts establish, maintain, and improve the programs.

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Chapter		#	Text of Policy / Recommended Action
4 – Sustainable Materials Management (cont.)	Recommended Actions (cont.) <i>(Education, Outreach, and Technical Assistance)</i>	5-s	Continue to educate customers on proper recycling techniques to reduce contamination of recyclables and organic feedstocks going to the materials recovery facilities and compost facilities.
		6-s	Increase educational outreach and promotion to single-family, multi-family, and non-residential customers to encourage recycling and reduce waste.
		7-s	Increase single-family food scrap recycling through a three-year educational cart tagging program.
		8-s	Continue to develop infrastructure and increase regional and local educational outreach, incentives and promotion to increase recycling of food scraps and food-soiled paper. These efforts should target single-family and multi-family residential developments, as well as nonresidential buildings such as schools, institutions, and businesses.
		9-s	Provide information and technical assistance to external agencies, such as local governments, schools, colleges, and other public and private organizations to increase their purchase of sustainable products. Support implementation of the county’s Sustainable Purchasing Policy through waste reduction, recycling, use of recyclable products, and green building.
	Recommended Actions <i>(Policy and Infrastructure)</i>	10-s	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.
		11-s	Pursue product stewardship 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, including, but not limited to, paint, carpet, fluorescent bulbs and tubes, mercury thermostats, batteries, unwanted medicine, mattresses, e-waste, paper and packaging, plastic bags and film, and sharps. Strategies may include Right to Repair legislation and framework legislation for addressing producer responsibility.

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Chapter	#	Text of Policy / Recommended Action
4 – Sustainable Materials Management (cont.)	12-s	Explore options to increase recycling and resource recovery through innovative methods and technologies.
	13-s	Assess and develop options if selected actions are not enough to achieve an overall 70 percent recycling rate.
	14-s	Reduce consumer use of common single-use items – for example, promote reusable shopping and produce bags.
	15-s	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.
	16-s	Develop a process and criteria to amend the designated recyclables list if conditions warrant adding or removing recyclables.
	17-s	<p>Use the following targets to measure the progress toward the goal of zero waste of resources:</p> <ol style="list-style-type: none"> 1. Generation rate target: <ul style="list-style-type: none"> • Per capita: 20.4 pounds/week by 2030, and • Per employee: 42.2 pounds/week by 2030. 2. Recycling rate target: Interim goal of 70 percent. 3. Disposal rate target: <ul style="list-style-type: none"> • Per capita: 5.1 pounds/week by 2030, and • Per employee: 4.1 pounds/week by 2030. <p>These targets should be evaluated at least every three years when data becomes available from the waste monitoring studies.</p>
	18-s	Develop a target for reducing greenhouse gas emissions from disposed waste by 2030, with 2007 emissions used as a baseline for comparison.
	Recommended Actions (cont.) (Policy and Infrastructure)	
	Recommended Actions (Measurement)	

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Chapter	#	Text of Policy / Recommended Action
4 – Sustainable Materials Management (cont.)	Recommended Actions (Grants)	19-s Continue to support the cities’ implementation of the Plan through the county waste reduction and recycling grant program and allocation of Local Solid Waste Financial Assistance funds from the Washington State Department of Ecology. The county should strive to maintain the level of funding to cities, increasing waste reduction and recycling grant amounts as Local Solid Waste Financial Assistance funding decreases; and should revise or amend grant criteria to reflect priority Comprehensive Plan actions.
		20-s Work collaboratively with cities and other stakeholders to develop a new competitive grant program funded from the tip fee that would be available to private entities, non-profits, and cities to support innovative programs that help meet plan goals.
		21-s Evaluate options to transition away from recycling collection events as enhanced recycling services are provided at renovated transfer stations, improved bulky item collection becomes available and cost effective curbside, and product stewardship programs emerge.
		22-s Develop a list of effective waste prevention and recycling efforts that can be implemented using existing and new grant funds.
	Recommended Actions (Green Building)	23-s Adopt green building policies and regulations that support the design of buildings and structures that are carbon neutral, are energy efficient, and use recycled materials.
		24-s Assist cities in developing green building policies and practices; encourage green building through Leadership in Energy and Environmental Design™ (LEED®), Built Green™, Living Building Challenge, and other certification programs.
		25-s Provide technical assistance and promote proper deconstruction, building reuse, and reuse of building materials.
	Recommended Actions (C&D Materials Recycling)	26-s Work collaboratively with cities to implement building codes that require compliance with construction and demolition debris recycling and handling requirements contained in county code. The county will provide outreach/promotion for city permitting and enforcement staff.

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Chapter	#	Text of Policy / Recommended Action
4 – Sustainable Materials Management (cont.)	Recommended Actions (cont.) (C&D Materials Recycling)	27-s Continue to explore options to increase the diversion of construction and demolition debris from disposal in the landfill, particularly for wood, metal, cardboard, asphalt shingles, carpet, and gypsum wallboard.
		28-s Increase regional recycling of construction and demolition materials through education and enforcement of construction and demolition debris recycling requirements.
		29-s Ensure that construction and demolition debris is managed in an environmentally sound manner by privately owned landfills via enforcement of construction and demolition debris handling requirements contained in county code.
	Recommended Actions (Collection)	30-s Involve the Vashon/Maury Island community and service providers to develop the appropriate type of recycling services provided curbside and at the transfer station. Include Vashon in the county's collection service standards for curbside services.
		31-s Explore options to increase the efficiency and reduce the price of curbside and multi-family collection of bulky items, while diverting as many items as possible for reuse or recycling.
	Recommended Actions (cont.) (Collection)	32-s Adopt the single and multi-family minimum collection standards.
		33-s Consider improvements to single-family collection services in the unincorporated area to increase the recycling rate.
		34-s Include non-residential recycling services in city contracts (consistent with state law).
		35-s Consider implementing an incentive-based rate structure for nonresidential garbage customers to encourage recycling.
		36-s Update and enforce building code requirements to ensure adequate and conveniently located space for garbage, recycling, and organics collection containers in multi-family, commercial, and mixed-use buildings.
		37-s Make recycling at multi-family complexes convenient by implementing best practices.

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Chapter		#	Text of Policy / Recommended Action
5 – Solid Waste Transfer and Processing System	Policies	T-1	Provide solid waste services to commercial 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 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 Solid Waste Division facilities with the highest 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.
	Recommended Actions	1-t	Except as noted in action 2-t, continue to implement transfer station modernization as set forth in the <i>Solid Waste Transfer and Waste Management Plan</i> and approved by the Metropolitan King County Council in 2007, including siting and building a new Northeast recycling and transfer station and closing the Houghton station when the new station is complete. Adapt the siting process included in the <i>Solid Waste Transfer and Waste Management Plan</i> to meet community needs in the Northeast service area.
		2-t	Although approved for closure under the Solid Waste Transfer and Waste Management Plan, reserve the option to retain the Renton station until the new urban transfer facilities have been completed and the impact of closure has been fully evaluated.

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Chapter		#	Text of Policy / Recommended Action
5 – Solid Waste Transfer and Processing System (cont.)	<i>Recommended Actions (cont.)</i>	3-t	Evaluate adding a second scale and an additional collection container at the Cedar Falls Drop Box to improve capacity.
		4-t	After the new recycling and transfer stations (including the new South station) are sited, if service level assessments indicate the need for additional capacity in the rural areas, consider siting drop box facilities.
		5-t	Periodically evaluate the level of service criteria to ensure that the criteria remain relevant.
		6-t	Explore prospects for the transfer of commercial loads of organics through county transfer stations.
		7-t	Continue to implement a resource recovery program at new recycling and transfer facilities to remove targeted materials from the waste stream.
		8-t	Encourage recycling processors to continue to improve facility sorting and processing equipment and practices to remove contaminants and separate recyclables into marketable commodity grades.
		9-t	In collaboration with stakeholders, pursue and identify new technologies and expanded processing capacity to serve the region, and more sustainably manage organic waste.
		10-t	Continue to evaluate and assess the feasibility of advanced materials recovery and anaerobic digestion at division facilities.
		11-t	In the event of an emergency, reserve the transfer system for municipal solid waste and make the recycling of related debris a priority.
		12-t	Identify potential temporary debris management sites where emergency debris can be stored until it is sorted for recycling or proper disposal.
		13-t	Provide education and outreach on the proper management of homegenerated sharps.

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Chapter	#	Text of Policy / Recommended Action
6 – Landfill Management and Solid Waste Disposal	<i>Policies</i>	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 Cedar Hills Regional Landfill closes to ensure no gap in service. Siting a replacement landfill located in King County will not be considered.
	<i>Recommended Actions</i>	1-d Further develop the Cedar Hills regional landfill to maximize disposal capacity. To account for technological advances, do not specify the next disposal method after ultimate Cedar Hills closure in this Plan. Conduct analysis of post Cedar Hills disposal options prior to the next Plan update to ensure adequate lead time for selecting, planning for, and implementing the next disposal method.
		2-d Continue to track, evaluate, and test other disposal and conversion technologies for their potential to handle all or a portion of the county's future waste. Provide updates on findings to division advisory committees on a regular basis.
		3-d To prepare for potential emergencies, work with state and regional authorities to coordinate an updated Debris Management Plan for King County.
		4-d Investigate beneficial reuse options for closed landfills, designing monitoring and environmental systems that will facilitate reuse of the properties, provide potential revenue, and provide continued benefit to the surrounding communities.
7 – Solid Waste System Finance	<i>Policy</i>	F-1 Keep tipping fees as low as reasonable, while covering the costs of effectively managing the system, protecting the environment, encouraging recycling and providing service to customers.

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Chapter		#	Text of Policy / Recommended Action
<p>7 – Solid Waste System Finance (cont.)</p>	<p><i>Recommended Actions</i></p>	<p>1-f</p>	<p>Adopt the following as division policies:</p> <ul style="list-style-type: none"> (A) Assess fees for use of the solid waste transfer and disposal system at the point of service. (B) 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, and to address low income needs. (C) Utilize the assets of the King County Solid Waste Division consistent with the conditions established in the Amended and Restated Solid Waste Interlocal Agreement with the cities. (D) The County General Fund will not charge use fees or receive other consideration from the Solid Waste Division 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. (E) Maintain reserve funds and routinely evaluate the funds for long-term adequacy and set contributions to maintain reasonable rate stability. (F) 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. (G) Use solid waste fees to fund mitigation payments to cities for impacts directly attributable to solid waste facilities per Revised Code of Washington 36.58.080 and the Amended and Restated Solid Waste Interlocal Agreement. (H) [Included in Proposed Ordinance, but inadvertently omitted from Plan] Use solid waste fees to fund required mitigation for solid waste facilities, including mitigation mandated by federal, state, and local regulations and permits. (I) Continue to evaluate and implement fiscally responsible operational changes to support a sustainable business model and maintain the assets of the solid waste facilities. (J) Include a target fund balance in the Solid Waste Division financial plan equal to at least 30 days of operating expenses. (K) Establish a minimum balance in the Rate Stabilization Reserve to mitigate the risks associated with a moderate-level economic recession. (L) Maintain the Landfill Post-Closure Maintenance Fund at a level to ensure that environmental monitoring and maintenance of the closed landfills will be fully funded through the end of their regulated post-closure maintenance periods, as defined by applicable law.

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Chapter		#	Text of Policy / Recommended Action
7 – Solid Waste System Finance (cont.)	<i>Recommended Actions (cont.)</i>	2-f	Maintain a Solid Waste Division financial forecast and cash-flow projection of four years or more.
		3-f	Subject to approval from the Metropolitan King County Council, define customer classes and establish equitable fees for each customer class based on services provided, benefits received, use of the system, and the costs, incurred or avoided, of providing those services.
		4-f	Consider alternatives to the current rate methodology, such as incorporating a transaction fee into the rate structure.
		5-f	Study the cost of providing services to self-haul customers, and to other customer classes if needed.
		6-f	Consider discounts for low-income customers consistent with RCW 81.77.195.
		7-f	Continue to explore new revenue sources to help finance the solid waste system.
		8-f	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 Interlocal Agreement.
		9-f	Develop the procedures to establish and maintain the Rate Stabilization Reserve.
		10-f	Maintain the following solid waste funds: <ul style="list-style-type: none"> • Landfill Reserve, • Landfill Post-Closure Maintenance, • Capital Equipment Recovery Program, and • Construction Fund.
		11-f	When possible, manage solid waste rates through smaller, more frequent increases, which in combination with the rate stabilization reserve, smooths rate increases over time.