

SUMMARY

Solid Waste Transfer and Waste Export System Plan

SUMMARY OF THE PROPOSED RECOMMENDATIONS

This *Solid Waste Transfer and Waste Export System Plan* (the Plan) – prepared by the Solid Waste Division of the King County Department of Natural Resources and Parks – provides a blueprint for the future of the county's solid waste management system. It presents recommendations that will guide King County as it prepares the solid waste system for waste export, during which time the transfer system will be upgraded, a public or private intermodal facility or facilities will be added to the system, and the county's Cedar Hills Regional Landfill will be closed.

King County Ordinance 14236 stipulated that the county prepare this waste export implementation and coordination plan. In 2004, the County Council adopted Ordinance 14971, which amended the timing for waste export planning and prioritized evaluation of the transfer station network as an integral part of the waste export system plan. It also established a process for collaborative participation by the cities in solid waste transfer and waste export system planning. This led to the formation of a cities advisory group – the Metropolitan Solid Waste Management Advisory Committee (MSWMAC) – and formalized city staff group meetings by creating the Interjurisdictional Technical Staff Group (ITSG) to advise and assist MSWMAC in its operation.

Ordinance 14971 outlined an iterative process of analysis and reporting that would culminate in a package of recommendations for the solid waste transfer and waste export system. The ordinance directed the division in collaboration with the stakeholders to, among other things:

- Evaluate the division's current transfer stations
- Plan a future transfer station system
- Investigate disposal options outside of King County
- Evaluate rail, barge, and truck hauling options for waste export
- Review public/private ownership options
- Analyze financing, staffing, and rate impacts
- Define the facility siting processes
- Establish a means of involving interested parties in the planning process
- Develop a waste export system plan to document the planning process and explain recommendations for a future system

These comprehensive analyses resulted in four milestone reports developed in collaboration with the Solid Waste Advisory Committee (SWAC), MSWMAC, ITSG, commercial solid waste haulers, King County Council staff, the division's labor union representatives, and division employees. These reports (discussed under *Background*) provide the foundation for the recommendations in this Plan and are contained in Appendix F.

Table 1 presents a brief overview of all the proposed recommendations and cites where more detailed discussion can be found in this Plan. The recommendations in this Plan will inform the next update of the *Final 2001 Comprehensive Solid Waste Management Plan* (the 2001 Solid Waste Plan) to be submitted to County Council and the cities for review and adoption by end of year 2007. Figure 1 shows the locations of existing facilities, indicating which facilities are recommended for closure, and the general areas of the county where new transfer facilities are being considered.

While the final system configuration could include more than one intermodal or disposal facility, for simplicity, this Plan refers to the siting of an intermodal and a disposal facility (singular).

Three fundamental objectives underlie all of the recommendations that follow:

- Keeping disposal fees low and stable
- Making existing facilities as efficient as possible
- Ensuring that facilities keep pace with the growth in customer base and changing technologies in the solid waste industry

Table 1. Recommendations for the solid waste transfer and waste export system

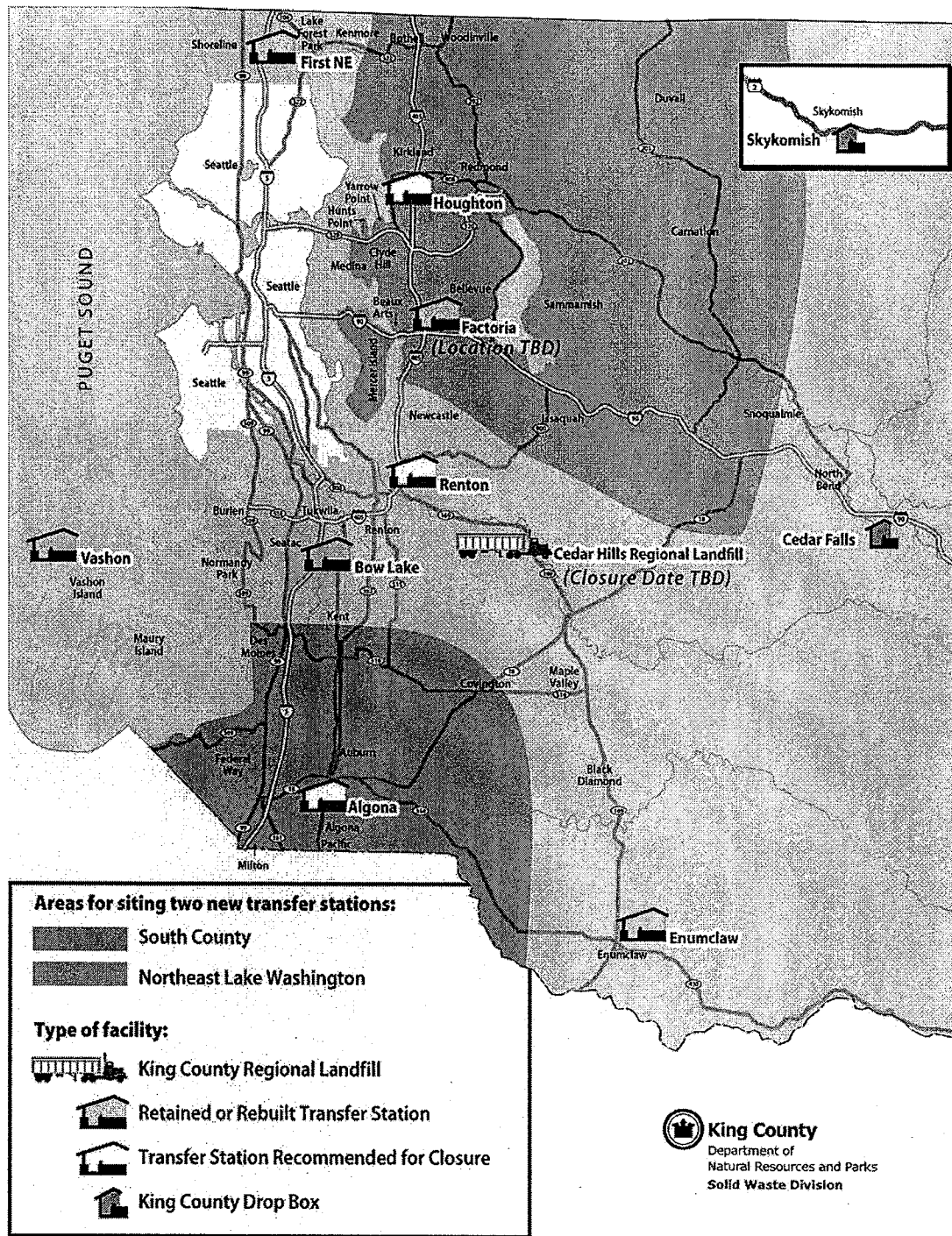
Plan Element	Recommendation	Discussion
<p>Solid Waste Transfer System</p>	<p>Modernize the transfer system to accommodate a growing population and industry changes and provide efficient and cost-effective services to customers</p> <p>Construct four new transfer stations:</p> <p><i>Bow Lake</i> – built on the existing site and adjacent property the division is negotiating to purchase from the Washington State Department of Transportation</p> <p><i>Factoria/Eastgate or alternative site in Bellevue</i> – built on the existing Factoria station site and an adjacent site owned by the division on Eastgate Way, or an alternative site located in and identified by the City of Bellevue and acceptable to King County</p> <p><i>Northeast Lake Washington</i> – built on a new site; location to be determined</p> <p><i>South County</i> – built on a new site; location to be determined</p> <p>Retain five existing transfer facilities:</p> <p>Enumclaw First Northeast (Shoreline) Vashon Cedar Falls (drop box facility) Skykomish (drop box facility)</p> <p>Close three existing transfer stations (when replacement capacity is available):</p> <p>Algona Houghton (Kirkland) Renton</p>	<p>Page 15</p>
<p>Public vs. Private Ownership and Operation of Facilities</p>	<p>Maintain the current mix of public and private ownership whereby:</p> <p>The private sector is the primary provider of the collection and processing of solid waste, recyclables, and construction, demolition, and landclearing debris</p> <p>The public sector is the primary provider of transfer services</p> <p>Once waste export begins, the disposal facility ownership and operation is contracted out</p> <p>The decision on the intermodal facility ownership and operation will be made when the need for and type of facility are determined</p>	<p>Page 23</p>

Plan Element	Recommendation	Discussion
Capacity of the Cedar Hills Regional Landfill¹	Explore opportunities for taking advantage of available landfill capacity to extend the life of this cost-effective disposal option; revise the <i>Cedar Hills Site Development Plan</i> and seek to maximize the capacity (lifespan) of the landfill, subject to environmental constraints, relative costs to operate, and stakeholder interests	Page 27
Options for Long-Haul Transport (via rail, barge, or truck)¹	Because transportation costs fluctuate with fuel prices, the decision on long-haul transport of solid waste to a disposal facility will be made no more than five years before implementation of waste export; based on current economics and local experience, rail transport appears the most feasible option	Page 33
Intermodal Facility¹	The decision on the need for and type of intermodal facility will be made no more than five years before waste export is implemented; the division will continue to monitor local intermodal capacity and retain the Harbor Island property as a potential option, while continuing to lease the property for other industrial uses	Page 35
Early Waste Export – Full or Partial	Issue a Request for Proposals for partial export of approximately 20 percent of the waste stream beginning in 2010 while keeping the Cedar Hills landfill operating; use the actual bid price to determine if this option is more cost effective than disposal at the Cedar Hills landfill	Page 39

Note:

1. Recent engineering studies and projections indicate that it is possible to extend the life of the landfill for three or four years beyond the currently projected closure date of 2016. Because in-county landfill disposal is less costly than full waste export, extending the life of Cedar Hills is cost effective for the region's ratepayers as well as the county. It also has the effect of extending some key decisions about waste export into the future when more is known about the market and prices for commodities and land. The actual date of closure will be based on additional engineering studies, cost analyses, and stakeholder input.

Figure 1. Locations of facilities and recommended changes



Consistency of Recommendations with Current Policies

The recommendations in this Plan are consistent with policies set forth in the 2001 Solid Waste Plan, as adopted by King County Ordinance 14236, with the following exceptions.

First, the 2001 Solid Waste Plan and ordinance broadly authorize the county to determine where new transfer facilities may be needed to efficiently serve customer needs (county policy RTS-7). While the need for a new station in south King County is identified in this Plan, the siting process and timeline for building a new facility will be more explicitly developed in the update to the 2001 Solid Waste Plan, which will be submitted to King County Council and the cities for adoption in 2007.

Second, the 2001 Solid Waste Plan incorporates the 1996 *Cedar Hills Site Development Plan* by reference. The site development plan guides the construction and operation of the landfill to comply with the permitted capacity and other regulatory requirements. The recommendation in this Plan is to revise the site development plan to extend the life of the landfill as long as possible and amend permits to allow continued operation. Increasing the capacity can be accomplished without significant environmental or community impacts, while keeping disposal fees as low as possible.

In addition, the 2001 Solid Waste Plan considered partial early waste export and concluded that it was not cost effective at the time. Because of the cost savings of extending the life of the landfill and the increased competition in the out-of-county disposal market, this Plan recommends issuing a Request for Proposals to solicit a cost commitment for early export of approximately 20 percent of the county's waste beginning in 2010. The bid prices will be evaluated to determine if partial early waste export should be implemented. Partial early export would add approximately one year to the lifespan of the Cedar Hills landfill and allow the division to test the disposal market before full waste export is implemented.

REPORT ORGANIZATION

The next few sections of the Plan provide the background and summary of analyses that led to the proposed recommendations. A timeline for implementing the Plan is also presented.

The remaining sections discuss in more detail each recommendation presented for the solid waste transfer and waste export system. Analyses conducted in the four milestone reports are summarized in each section to provide the framework for decisions and the policies or data used to support them.

The final section describes the next steps in the planning and reporting process, including the update of the 2001 Solid Waste Plan.

In addition, supporting appendices are provided with the Plan for easy reference. Appendix F, containing the four milestone reports, is provided on CD attached to the back cover of this Plan. Each appendix is listed below with a summary of additional information it provides.

- **Appendix A:** *Supplemental Environmental Impact Statement* – presents an environmental analysis of the alternatives developed in Milestone Report 4, including a responsiveness summary from the public review process
- **Appendix B:** *Response to Ordinance 14971, Section 5B* – addresses additional issues as required by King County Ordinance 14971 (referred to as a Business Plan in the ordinance)
- **Appendix C:** *Solid Waste Facility Siting Plan* – outlines the process and criteria for siting solid waste management facilities
- **Appendix D:** *Potential Effects of Waste Reduction and Recycling on the Solid Waste Transfer and Waste Export System* – discusses the effects of a more aggressive recycling goal in extending the life of the Cedar Hills landfill
- **Appendix E:** *Agreement Between the King County Solid Waste Division and the City of Bellevue on Replacement of the Factoria Transfer Station* – agreement on a process for determining whether to build a new Factoria transfer station on the existing site and adjacent property owned by the division, or an alternative site located in and identified by the City of Bellevue
- **Appendix F:** *Milestone Reports 1 through 4 (provided on CD attached to back cover)* – contains the four analytical reports used to develop this Plan

The rate forecast and proposal accompanies this Plan as a separate document, along with legislation for Council adoption.

BACKGROUND

The division manages solid waste transfer and disposal services for approximately 1 million tons of garbage per year, which represents the waste generated by more than 1.2 million residents and 637,000 employees in King County, excluding the cities of Seattle and Milton. The division and participating cities also manage programs and services for recycling and waste reduction in the region. Solid waste management is guided by the policies in the most current adopted solid waste plan.

Currently, the county owns and operates the only remaining landfill in King County – the Cedar Hills Regional Landfill in the Maple Valley area. The 2001 Solid Waste Plan directs the division to transition the county to waste export once the Cedar Hills landfill reaches its permitted capacity and closes.

Current county policy rejects alternatives to waste export, including development of a new landfill in King County or incinerating the county's waste, and Council has directed the division to begin planning for waste export. This Plan fulfills that policy direction by considering waste export to an out-of-county landfill for future disposal of the county's solid waste; however, other disposal technologies, such as waste-to-energy (e.g., incineration, gasification, pyrolysis), will be explored in the update of the 2001 Solid Waste Plan.

In addition to the landfill, the division currently operates eight transfer stations and two rural drop boxes that accept solid waste, recyclable materials, and, in one case, household hazardous waste. Six of the division's eight solid waste transfer stations have been operating since the 1960s and have only been updated to meet regulatory requirements and to ensure the safety of our employees and customers. With increases in solid waste tonnage from the region's growing population base, some of the stations are currently operating at or over capacity. At the same time, the stations are not able to keep pace with advances in solid waste technology. Space and building constraints have also limited the division's ability to provide expanded recycling services at some stations.

In summary, the division's transfer facilities are no longer able to efficiently meet the needs of the commercial haulers and business and residential self-haulers who use them. As the facilities continue to age and the need for solid waste and recycling services grows and changes, it has become imperative to make improvements to some stations, close stations that cannot be adequately improved, and construct new transfer stations to replace the closed stations.

The analysis of the transfer system is integral to the development of the waste export system plan because an improved transfer station network will be required under any future scenario for an effective regional solid waste management system. Transfer facilities are vital to communities for the safe and efficient

handling of solid waste through nearly one million customer transactions each year.

The most important function of the stations is to consolidate many smaller garbage loads into fewer, larger loads for more efficient transport and disposal. This function will become even more critical when waste export begins. Before the Cedar Hills landfill is closed, transfer stations will need to be equipped with waste compactors to compress solid waste loads and carry more tons per trip, which will minimize traffic on the road network. Because the various components of the regional solid waste system form an integrated network, decisions about how and when to close the landfill are examined in the context of the system as a whole, from transfer stations, to a possible intermodal facility, to long-haul transport to a disposal facility.

PROCESS FOR DEVELOPING THE PROPOSED RECOMMENDATIONS

The overarching goal in upgrading the solid waste transfer and waste export system is to maximize the efficiency of facilities and services to ensure reliable, safe, high-quality, and cost-effective service to customers. To develop alternatives and the final recommendations, four analytical milestone reports were prepared, focusing in detail on the following issues:

- Alternatives for the configuration of the solid waste transfer station system
- Public versus private options for ownership and operation of transfer, intermodal, and disposal facilities
- Future capacity of the Cedar Hills landfill and potential for extending its life
- Potential out-of-county disposal facilities
- Options for long-haul transport of waste once the landfill closes
- The need for, number of, and type of intermodal facility or facilities
- Scenarios for early (partial or full) waste export

More specifically, the four reports, included as Appendix F, present the following information:

- **Milestone Reports 1 and 2** identify the need to renovate the county's aging transfer facilities by developing and applying criteria and standards to evaluate the level of service to users, station capacity to handle solid waste and recyclable materials, local and regional effects of the facility, and cost. In these studies, three of the county's transfer stations were not evaluated because they are relatively new or are being rebuilt. The Enumclaw and Vashon transfer stations were constructed in 1993 and 1999, respectively. The First Northeast station in Shoreline is currently being rebuilt and is scheduled to reopen in fourth quarter 2007. These three stations meet, or will meet, all of the transfer station criteria evaluated in Milestone Report 2.

The five remaining transfer stations – Algona, Bow Lake, Factoria, Houghton, and Renton – were evaluated in this planning process. All five stations failed to meet the level-of-service standards that were established in Milestone Report 1 and need to be reconstructed or relocated. This finding is not surprising considering these facilities were constructed more than 40 years ago (see section on *Solid Waste Transfer System*).

- **Milestone Report 3** discusses options for public and private ownership and operation of solid waste and recycling facilities in King County. Recommendations based on the options presented in Milestone Report 3 were reported in Milestone Report 4. In summary, Report 4 recommends that the system retain the current mix of public-private operations. Under this scenario, the private sector would continue to be the primary provider of curbside collection of solid waste, recyclable materials, and

construction, demolition and landclearing (CDL) debris; the division would remain the primary provider of transfer system facilities; the private sector would continue to process recyclable materials and CDL; and, once waste export begins, the selected disposal facility (or multiple facilities) would be contracted out. The decision on the need for, number of, and type of intermodal facilities was deferred until no more than five years before the implementation of waste export (see section on *Public versus Private Ownership and Operation of Facilities*).

- **Milestone Report 4** identifies packaged alternatives for the configuration of the transfer station network, and decisions required to determine the capacity (or lifespan) of the Cedar Hills landfill; potential disposal locations once the landfill closes; the most feasible type of long-haul transport; the need for, number of, and type of intermodal facility or facilities; and the timing of waste export.

This Plan presents two types of proposed recommendations: 1) decisions that can be made now using existing data on the solid waste system and 2) a framework for decisions that will be made in the future, once the closure date for the Cedar Hills landfill is determined. Because of the changing marketplace and commodity prices, the final decision on when to close the landfill will be a pivotal factor in the final analysis and detailed recommendations for various components of the system.

The recommended actions set forth in this Plan will be implemented in a sequential manner to minimize disruptions to the vital solid waste management services provided to customers throughout the region. For example, some transfer stations designated as "capable of being expanded on site" by county policy RTS-12 (Ordinance 14236) are in the planning or implementation phases of reconstruction. A Facility Master Plan is being developed for replacing the Bow Lake station, while the First Northeast station in Shoreline is currently being rebuilt and is scheduled to reopen in fourth quarter 2007.

The complete package of recommendations in this Plan, as adopted, will inform the update of the 2001 Solid Waste Plan, expected to be completed by December 2007. A study of the effects of the proposed recommendation on the solid waste disposal fee is provided in a rate forecast and proposal submitted with this Plan.

The transfer station alternatives and other options presented in Milestone Report 4 were evaluated in a Supplemental Environmental Impact Statement (EIS), prepared in accordance with the State Environmental Protection Act. The EIS evaluated possible actions in terms of transportation, noise, air quality and odor, energy, land and shoreline use, and public services and utilities. The EIS did not identify any significant unavoidable adverse impacts associated with the recommendations in this Plan. The Final Supplemental EIS is included as Appendix A.

TIMELINE FOR IMPLEMENTING THE TRANSFER AND WASTE EXPORT SYSTEM RECOMMENDATIONS

The timeline for completing the siting, design, and construction of transfer stations is provided below.

Schedule for Transfer Station Completion	
New First Northeast station	November 2007
New Bow Lake station	2010
New station at Factoria/Eastgate or alternative location in Bellevue	2011
New Northeast Lake Washington station	2015
New South County station	2015

Implementing the system upgrade as a whole, as recommended in this Plan, would require the following projected timeline:

Action Items	
Adoption of this Plan by the King County Council	Fourth quarter 2006
Adoption of the county's new <i>Cedar Hills Site Development Plan</i> by the King County Council	First quarter 2008
Agreement reached on an estimated closure date for the Cedar Hills Regional Landfill based on further studies by the division and stakeholder input	By end of year 2008
Request for Proposals issued for early waste export of approximately 20% of the solid waste stream	By second quarter 2009

Pending Actions	
Decisions about the intermodal facility, long-haul transport, and disposal facility – most likely made during the procurement process based on the market and commodity prices	No more than five years before the agreed-upon date for closure of the Cedar Hills landfill (making a decision any earlier could preclude new developments in the market or fail to account for changes in commodity or land prices)

