

Executive Summary

Purpose

This draft report has been prepared in response to [Council Motion 14145](#). It presents analysis of operational, policy, and capital strategies to provide transfer service to the northeast portion of King County including the pros and cons of constructing a new transfer station compared to implementing demand management strategies, and analysis of the potential closure of the Renton Transfer Station. The goal of the proposed strategies is to minimize customer wait time and avoid over- or under-utilization of transfer stations.

Summary of Findings

The region has multiple options for managing the forecasted growth in transactional demand in the northeast service area. Three alternatives that would not build a Northeast Recycling and Transfer Station were carefully analyzed to confirm the viability of the solutions and compare them to the adopted plan, which calls for a new station to be constructed. These options combine policy decisions, capital investments, and operational changes.

The alternatives vary in terms of cost and complexity. Additionally, future constraints at each transfer station will vary, so demand strategies for each station also vary.

Building on analysis that was completed in 2013, and in response to the scope outlined in [Council Motion 14145](#), four concepts for providing service were analyzed. The general concept descriptions are:

Concept 0 (Baseline)	<ul style="list-style-type: none"> • No Northeast Recycling and Transfer Station • Does not direct commercial haulers • No self-haul restrictions
Concept 1 (E1*)	<ul style="list-style-type: none"> • No Northeast Recycling and Transfer Station • Direct commercial haulers to use certain transfer stations so that transfer system use is more evenly balanced and in particular so that use of Shoreline is increased commercial haulers
Concept 2 (E2*)	<ul style="list-style-type: none"> • No Northeast Recycling and Transfer Station • Restrict the hours that self-haulers can use Factoria and extend Factoria operating hours so that self-haulers are encouraged to use the extended hours or to use alternative transfer stations during the restricted hours
Concept 3 (adopted Transfer Plan)	<ul style="list-style-type: none"> • Build a Northeast Recycling and Transfer Station

**Reflect E1 and E2 as referenced in Council Motion 14145.*

Variation in recycling rate assumptions could have a measurable effect on overall tonnage rates. For instance, a ten percent lower recycling rate by 2030 would equate to an approximate 33 percent increase in tonnage. While this sensitivity will be important to monitor, it is not expected to have a substantial effect on transactional volume, which is the major focus of this review.

City participation in our regional system affects both tonnage and transactions. If the five cities that have not signed an amended interlocal agreement reconsider and sign an agreement that extends through 2040, the division would expect to receive an additional 50,000 tons more per year. This is estimated to equate to an eight percent increase in transactional volume. However, it is important to note that even if they do not sign the extended agreement, this issue would not begin to affect operations until July 2028 when the current agreement expires. If these cities extend their agreements, tonnage will reach record levels again before 2040.

Alternatives to Building a New Station are Viable

The concepts were supplemented with mitigation strategies to assess viable options for managing transactional demand and minimizing customer wait times. The following table lists mitigation strategies that were analyzed.

A Range of Mitigation Strategies Were Analyzed to Smooth Demand and Increase Site Capacity	
• Additional inbound/outbound scales	• Mandatory curbside collection
• Additional onsite queuing areas	• Lower cost curbside bulky collection service
• Additional stalls for increased tip floor capacity	• Material bans (wood and yard waste)
• Extended operating hours	• Lower regional direct fee
• Additional staffing for unloading assistance	• Incentive/peak hour pricing model
• Provide on-line wait time information	• Higher minimum fee
• Do not provide household hazardous waste service at Factoria	

Capital solutions such as the addition of scales or operational changes to extend operating hours would help manage increased traffic volumes. Policy changes such as mandated collection or material bans would help to reduce transactional demand, but would also require that the county and cities pass ordinances and amend collection contracts.

Under any of the concepts and strategies, the Renton and South County transfer stations are not expected to experience constraints that require mitigation. Bow Lake was designed to accommodate additional scales and onsite queuing space and would require such enhancements regardless of the chosen approach. The Houghton Transfer Station was not modeled because it is assumed to be closed by 2023.

While additional approaches are detailed in the body of this report, the following tables summarize what appear to be the most effective approaches for minimizing customer wait times and providing for more optimal utilization of the transfer system network. Each table focuses on one of the four basic concepts for Factoria and Shoreline and highlights the impacts, mitigation, and costs for that concept.

Concept 0:	No Northeast Recycling and Transfer Station, does not direct commercial haulers, no self-haul restrictions (Baseline)
Site	Summary of Peak Hour Conditions
Factoria	<p><u>Impacts</u></p> <ul style="list-style-type: none"> • Substantial queuing of vehicles impacting driveways and the intersection of SE 32nd St/Richards Rd • Scale-to-scale time would triple for self-haulers and double for commercial haulers. • The total wait time for all customers would increase dramatically due to off-site queuing • Additional vehicle traffic during p.m. peak commute hours • Shift of vehicle traffic in the region and increased vehicle miles travelled • Bellevue has indicated the Conditional Use Permit may be subject to modification <p><u>Most Effective Mitigation Strategies</u></p> <ul style="list-style-type: none"> • Implement King County ordinance to add peak pricing and to change hours • Extend weekday closing time from 4 p.m. to 10 p.m. and weekend from 5:30 p.m. to 8 p.m. <p><u>Costs</u></p> <ul style="list-style-type: none"> • Annual operating costs increase ~\$1.5 million • Annual revenue increase ~\$2.3 million
Shoreline	<p><u>Impacts</u></p> <ul style="list-style-type: none"> • Scale-to-scale time would nearly double for self-haul and commercial customers <p><u>Most Effective Mitigation Strategies</u></p> <ul style="list-style-type: none"> • Add staff for the commercial tipping floor • Add an outbound scale <p><u>Costs</u></p> <ul style="list-style-type: none"> • Annual operating costs increase ~\$70,000 • Capital cost ~1.7 million

Concept 1:	Direct commercial haulers, no Northeast Recycling and Transfer Station (E1*)
Site	Summary of Peak Hour Conditions
Factoria	<p><u>Impacts</u></p> <ul style="list-style-type: none"> • Substantial queuing of vehicles impacting driveways and the intersection of SE 32nd St/Richards Rd • Scale-to-scale time would triple for self-haulers and double for commercial haulers • The total wait time for all customers would increase dramatically due to off-site queuing • Additional vehicle traffic during p.m. peak commute hours • Shift of vehicle traffic in the region and increased vehicle miles travelled • Bellevue has indicated the Conditional Use Permit may be subject to modification <p><u>Most Effective Mitigation Strategies</u></p> <ul style="list-style-type: none"> • Implement King County ordinance to add peak pricing and to change hours • Extend weekday closing time from 4 p.m. to 10 p.m. and weekend from 5:30 p.m. to 8 p.m. <p><u>Costs</u></p> <ul style="list-style-type: none"> • Annual operating costs increase ~\$1.5 million • Annual revenue increase ~\$2.3 million
Shoreline	<p><u>Impacts</u></p> <ul style="list-style-type: none"> • Moderate queuing of vehicles impacting the intersection of Meridian Ave N/N 165th St • Scale-to-scale time would double for all customers because commercial haulers are directed to Shoreline to balance the system <p><u>Most Effective Mitigation Strategies</u></p> <ul style="list-style-type: none"> • Add staff for the commercial tipping floor • Add an outbound scale <p><u>Costs</u></p> <ul style="list-style-type: none"> • Annual operating cost increase ~\$340,000 • Capital cost ~\$1.7 million

**Reflects E1 as referenced in Council Motion 14145*

Concept 2:	Restrict self-haul, no Northeast Recycling and Transfer Station (E2*) <i>(note that this Concept assumes extended hours at Factoria)</i>
Site	Summary of Peak Hour Conditions
Factoria	<p><u>Impacts</u></p> <ul style="list-style-type: none"> • Substantial queuing of vehicles impacting driveways and the intersection of SE 32nd St/Richards Rd • Scale-to-scale time would more than double for self-haulers and significantly increase for commercial haulers • The total wait time for all customers would increase dramatically due to off-site queuing • Additional traffic during p.m. peak commute hours • Shift of vehicle traffic in the region and increased vehicle miles travelled • Minor increase in commercial haul traffic and decrease in self-haul traffic • Bellevue has indicated the Conditional Use Permit may be subject to modification <p><u>Most Effective Mitigation Strategies</u></p> <ul style="list-style-type: none"> • Ban yard/wood waste • Implement mandatory collection • Introduce low cost curbside bulky waste collection <p><u>Costs</u></p> <ul style="list-style-type: none"> • Annual operating costs increase ~\$1.5 million • Options to provide yard/wood waste service range from providing a drop box somewhere in the service area at a capital cost of approximately \$18.5 million and an operating cost of about \$600,000 annually, to allowing the material to flow to other transfer facilities and private service providers which would have minimal direct costs, but could result in revenue loss
Shoreline	<p><u>Impacts</u></p> <ul style="list-style-type: none"> • Scale-to-scale time would double for all customers <p><u>Most Effective Mitigation Strategies</u></p> <ul style="list-style-type: none"> • Add staff for the commercial tipping floor • Add an outbound scale <p><u>Costs</u></p> <ul style="list-style-type: none"> • Annual operating cost increase ~\$340,000 • Capital cost ~\$1.7 million

**Reflects E2 as referenced in Council Motion 14145*

Concept 3:	Build a Northeast Recycling and Transfer Station
Site	Summary of Peak Hour Conditions
Factoria	<u>Impacts</u> <ul style="list-style-type: none"> • Scale-to-scale time for self-haul customers would increase moderately <u>Most Effective Mitigation Strategies</u> <ul style="list-style-type: none"> • None recommended <u>Costs</u> <ul style="list-style-type: none"> • None
Shoreline	<u>Impacts</u> <ul style="list-style-type: none"> • None <u>Most Effective Mitigation Strategies</u> <ul style="list-style-type: none"> • None required <u>Costs</u> <ul style="list-style-type: none"> • None
Northeast	<u>Impacts</u> <ul style="list-style-type: none"> • None conditions of concern <u>Most Effective Mitigation Strategies</u> <ul style="list-style-type: none"> • None required <u>Costs</u> <ul style="list-style-type: none"> • Capital cost ~\$97 million (inflated)

Next Steps

Based upon the data and the analysis the division has done to date, it appears that there are viable alternatives to building a new Northeast Recycling and Transfer Station even when the Houghton Transfer Station is closed (no later than 2023). These alternatives are not without impacts, however, and they require the support and potential policy actions from our City partners. The alternatives require a variety of other actions and decisions that must be taken in order to mitigate the impacts on other transfer stations.

During this recent study, several significant questions have been raised by County Council members, our City partners, other stakeholders, and staff about the future of our solid waste system. These questions highlight the importance of looking at the system as a whole, and not just the transfer stations, in order to address the future of the solid waste system.

1. How can the investment in the Cedar Hills Regional Landfill be maximized by increasing its capacity through design and operational strategies?
2. How can the region significantly increase its waste prevention and recycling rates to achieve our environmental goals and eliminate resources from being buried in a landfill?
3. How can we, King County, our City partners, and the private sector, provide excellent customer service at the curb and at the transfer stations consistent with our values to be good environmental stewards and neighbors?
4. What is the best approach to ensuring the revenues collected will cover the expenses of the solid waste system?

The following summarizes the next steps;

- Review this draft report with City partners and other stakeholders through briefings and advisory meeting discussions and reflect these discussions in the final report.

- Assess the potential impacts should Bellevue, Clyde Hill, Hunts Point, Medina, and Yarrow Point choose to extend their contract with King County to 2040, and reflect these findings in the final report.
- Transmit a final report to the County Council by June 30, 2015.
- Continue the Comprehensive Solid Waste Management Plan (Comp Plan) development process with City partners and other stakeholders to reflect the findings and recommendations of the final Transfer Plan Review report. A draft Comp Plan is expected to be ready for review in early 2017.