



CITY OF KIRKLAND

Public Works Department

123 Fifth Avenue, Kirkland, WA 98033 425.587.3800

www.kirklandwa.gov

MEMORANDUM

To: Kurt Triplett, City Manager

From: John MacGillivray, Solid Waste Programs Supervisor
John Burkhalter, Development & Environmental Engineering Manager
Julie Underwood, Director of Public Works

Date: November 25, 2020

Subject: NORTHEAST RECYCLING AND TRANSFER STATION SITING UPDATE

RECOMMENDATION:

It is recommended that the City Council receive a presentation during its December 8, 2020 Study Session from King County Solid Waste Division project managers on the status of the siting of the Northeast Recycling and Transfer Station (NERTS). Kirkland Solid Waste Division staff will be on hand to participate in the discussion and respond to questions.

A packet of informational documents provided by King County is included with the memorandum as Attachment A. A King County presentation slide deck is included at Attachment B.

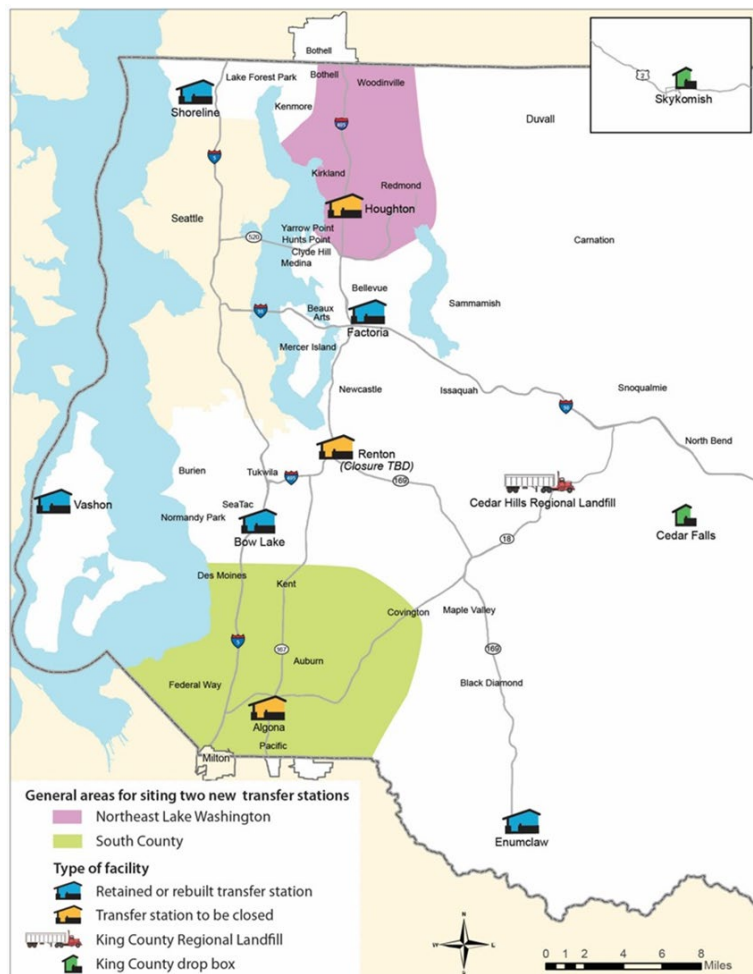
HOUGHTON TRANSFER STATION BACKGROUND:

The King County Solid Waste Division (KCSWD) owns, operates, and maintains eight urban and two rural transfer stations (see Map 1, "King County Transfer System," below). At these transfer stations, garbage that is received from collection companies such as Waste Management as well as from residential and commercial self-haul customers is consolidated for bulk transport on 53-foot container trailers to the County's Cedar Hills Regional Landfill (CHRL) located in the unincorporated Maple Valley area.

The Houghton Transfer Station (HTS), located in the Bridal Trails area and adjacent to the closed Houghton landfill, has been in operation since 1967. There are 37 cities in King County with solid waste interlocal agreements with the County that require those cities to direct their garbage into the transfer system and pay the County a per-ton disposal fee ("tipping fee") to fund operations and landfill disposal. The cities of Seattle and Milton do not have solid waste interlocal agreements with King County. The tipping fee is used to pay for administration; bonded debt for capital improvements projects; recycling programs; and the operation and maintenance of the transfer stations, the CHRL, and several closed landfills through the County. King County is responsible for setting disposal fees, which are subject to review by participating cities and, ultimately, approval by the Metropolitan King County Council (MKCC). The City of Seattle is not part of the King County transfer and disposal system. Seattle owns and operates its own transfer stations and rails its waste to an out-of-county landfill.

The KCSWD has contemplated the closure and replacement of the HTS for the past two decades, and a recommendation to replace the station was made in the [2006 Solid Waste Transfer and Waste Export Plan](#). The HTS property was first an open landfill between the 1940's and the mid-1960's. In 1965, King County closed the landfill and opened a transfer station on the south side of the property in 1967. Given the station's obsolete infrastructure, its location in a residential neighborhood, and its failure to meet established criteria for a modern transfer facility, a siting process for a new NERTS is underway. The KCSWD was given authority to replace the station upon the 2019 approval of the Comprehensive Solid Waste Management Plan by cities and the MKCC.

Map 1: King County Transfer System



TRANSFER STATION SITING DETAILS

Transfer stations are regarded as essential public facilities, subject to the siting guidelines in [RCW 36.70A.200](#), which also is called the "Growth Management Act." The transfer station siting process is led by the KCSWD. The final decision about the location of a new transfer station falls exclusively with the King County Executive, although the decision is informed from input received from the participating cities and various stakeholders in the service area. To date, the KCSWD has constructed three new transfer stations—Shoreline, Bow Lake, and Factoria—and a fourth, the South County Recycling and Transfer Station (SCRTS) in Algona, currently is in the design phase and will replace the aging Algona Transfer Station. In all instances where an old station has been replaced, the new

station has either been built on the site of the old station or has been built adjacent to the former facility.

Capital funding for new stations is provided through the issuance of bonded debt and the debt is secured by the revenues from users of the King County stations. As all ratepayers collectively have funded the construction of new transfer facilities throughout King County, so, too, shall all ratepayers in King County collectively fund the construction of the NERTS.

Construction costs for new King County new transfer stations increase over time. Any unforeseen or unnecessary delays in the siting process and construction of the NERTS will result in substantial increases in property acquisition and construction costs. As shown below in Table 1, the projected cost for NERTS is now about \$174 million and rising. As recently as 2015, King County estimated the NERTS construction cost to be \$97 million.

Table 1: Regional Transfer Station Costs		
Station	Year Opened	Cost
Shoreline Transfer Station	2009	\$39,000,000
Bow Lake Transfer Station	2014	\$88,000,000
North Seattle Transfer Station*	2016	\$108,000,000
Factoria Transfer Station	2019	\$94,000,000
South County Recycling and Transfer Station	TBD	\$144,000,000 (est)
Northeast Recycling and Transfer Station	TBD	\$174,000,000 (est)

*This station is owned and operated by the City of Seattle and is included for the purpose of comparison.

Solid waste transfer stations can be regarded as unwelcome by host cities and potential host cities. However, unlike the aging HTS, modern transfer facilities can be community assets and offer a variety of services to users such as increased opportunities to recycle bulky and difficult-to-recycle items, household hazardous waste disposal facilities, and yard waste disposal. Modern transfer facilities are fully enclosed to control odor and noise. Waste is compacted on-site, which reduces substantially the number of the carbon-emitting trips needed to transport waste to the landfill. Facilities often are built to the highest LEED standards and incorporate measures such as rainwater recovery for dust control systems and roof mounted solar panels. Public amenities also may be incorporated into the design and can include public meeting spaces and/or park and play areas. Garbage rates in host cities also tend to be lower because of lower contracted waste hauler transportation costs.

NERTS SITING DETAILS
Core Cities Work Group

The Core Cities group was formed at the beginning of the siting process and has been meeting monthly since November 2019. The KCSWD has coordinated the work of the Core Cities work group and Siting Advisory Group. Jacobs Engineering is acting as the prime project consultant and Enviro Issues is charged with coordinating communications. The Core Cities are Kirkland, Redmond, Sammamish, and Woodinville, and they represent the cities in which the NERTS may be sited ("Study Area"). The Study Area is distinguished from the Service Area in that the Study Area defines the area in which the new station will be located whereas the Service Area is larger and can overlap with other adjacent service areas. For instance, in the case of NERTS, the study area includes the four aforementioned cities, but the Service Area includes parts of Bothell and Kenmore. At this time, the

City of Sammamish has declined to participate actively in the siting process because no potential sites have been identified in Sammamish.

Kirkland's Core Cities work group representatives are:

Tracey Dunlap, Deputy City Manager
John MacGillivray, Solid Waste Programs Supervisor
Jenna McInnis, Solid Waste and Recycling Coordinator
Tracy Durnell, Education and Outreach Specialist

The Core Cities work group is tasked with advising King County on its project timeline, reviewing the project consultant's scope of work, participating in communications activities via a communications subcommittee, reviewing pass/fail and functional site evaluation criteria, and reviewing and commenting on the initial list of 15 potential transfer station sites and the five finalist sites.

Siting Advisory Group (SAG)

The SAG is comprised of a broader group of stakeholders and is tasked with assisting in the development of site selection criteria; identifying community concerns and impacts; creating public awareness of the project; and providing general review, input, opinions, and preferences to the KCSWD. More information on the SAG's charter, membership, timeline, and meeting schedule is included in the materials provided (see Attachment A). The City representatives on the SAG are Tracey Dunlap and John MacGillivray. The Kirkland residents serving on the SAG are Ronald Kim, James Randolph, William Su, and Susan Vossler.

POTENTIAL TRANSFER STATION SITES

After an initial round of site screening using pass/fail and GIS criteria, the KCSWD has reduced the list of potential sites to 15 in the Study Area. Applying the pass/fail criteria is the first step in the screening process and is intended to automatically exclude sites for such reasons as being located in a 100-year flood plain or not being located in the contiguous Urban Growth Area. GIS criteria focus upon things such as identifying sites larger than eight acres, proximity to freeways or major arterial streets, and that the assessed value of the sites is within budget. Later in the process, Broad Area Site Screening (BASS) and functional criteria are applied to reduce the list of potential sites to five. Those criteria take into account the size and shape of the site, geotechnical and environmental conflicts, zoning and economic compatibility, social equity, property cost and availability, and the proximity of schools, parks and residences.

There are eight sites in Redmond, five in Kirkland, and two in Woodinville. There are no sites in the City of Sammamish because no sites could be identified that meet the parcel size, pass/fail, and GIS screening criteria. *The sites listed in Table 2 have not been ranked and are not presented in any particular order.* The site numbers correlate with the site identification numbers shown on the map in the Attachment A materials. The pass/fail, GIS, and functional criteria used to filter the sites to the final 15 also are included in the attached packet.

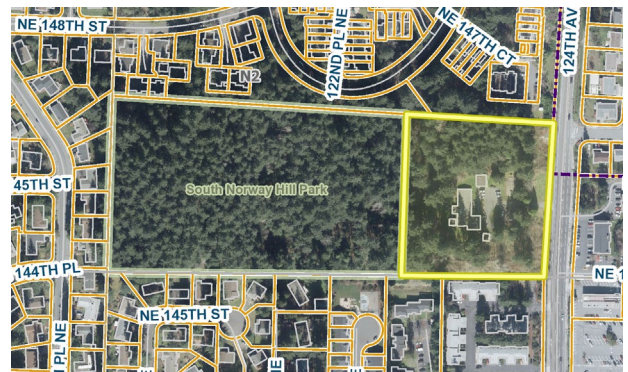
Table 2: Potential NERTS Sites					
Site #	Site Name	Address	City	Acreage	Assessed Value
1	Schuler Rubber	16901 Redmond-Woodinville RD NE	Woodinville	39.7	\$695,000
2	South Norway Hill Park	14607 122nd Ave NE	Kirkland	14.7	\$2,766,200
3	Willows and NE 124th St	Willows Road and NE 124th St	Redmond	15.4	\$3,349,900
4	South of Cadman	7039 196th Ave NE	Redmond	17.8	\$5,933,400
5	Cadman/Olympian	18816 NE Union Hill Road	Redmond	17.1	\$12,070,500
6	Crane Aerospace	10201 Willows Road NE	Redmond	15.5	\$13,598,800
7	Physio-Control	11811 Willows Road NE	Redmond	12.2	\$13,355,600
8	Mini Storage	11815 124th Ave NE	Kirkland	23.9	\$38,989,200
9	Winsome Trading	16111 Woodinville-Redmond Road NE	Woodinville	13.6	\$26,888,300
10	USPS	7241 185th Ave NE	Redmond	13.6	\$26,355,300
11	Houghton Transfer Station	11724 NE 60th St	Kirkland	25.4	\$0
12	Houghton Park and Ride	7024 116th Ave NE	Kirkland	6	\$0
13	Heronfield	11311 NE 120th St	Kirkland	8.5	\$14,300,100
14	Watson Asphalt and DTG	8504 192nd Ave NE	Redmond	17.5	\$5,544,500
15	Aerojet Rocketdyne	11411 139th PI NE	Redmond	26.8	\$15,039,000

Discussion of Potential Kirkland Sites

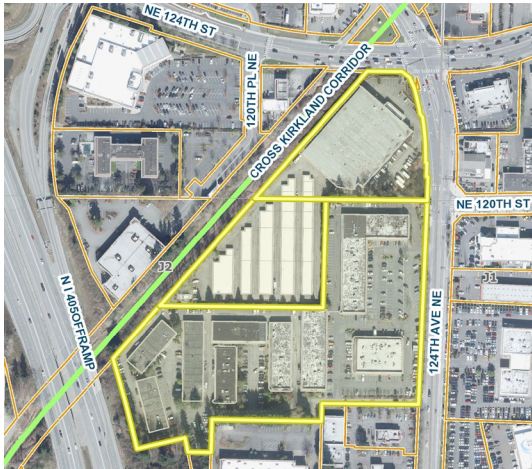
As noted, there are five potential Kirkland sites on the final list of 15 sites. Based upon an internal assessment of the five Kirkland sites, staff has formally asked the KCSWD to remove sites 2, 8, and 13 from the list and has suggested to the KCSWD that these three sites are not—for the reasons presented below—suitable to host a transfer station facility. As of this writing, the KCSWD has declined to remove the sites from the list of potential sites. According to the previously referenced RCW 36.70A.200 (5), “No local comprehensive plan or development regulation may preclude the siting of essential public facilities.” However, staff anticipates that once the final site ratings are completed, none of these three sites will be ranked high enough to make it into the final five sites.

Site 2: South Norway Hill Park

This 14.7-acre site is a combination of two parcels: City-owned park land (South Norway Hill Park) and a parcel to the east upon which a treatment center is located. It is surrounded on three sides by medium-to-high density residential. Siting a station here would be a significant change in use, would result in the loss of trees, displace wildlife, and result in the loss of park land. A station sited here would contribute to traffic congestion in the area, and access to the freeway is not ideal. The assessed value of the parcel to the east is \$2.76 million.



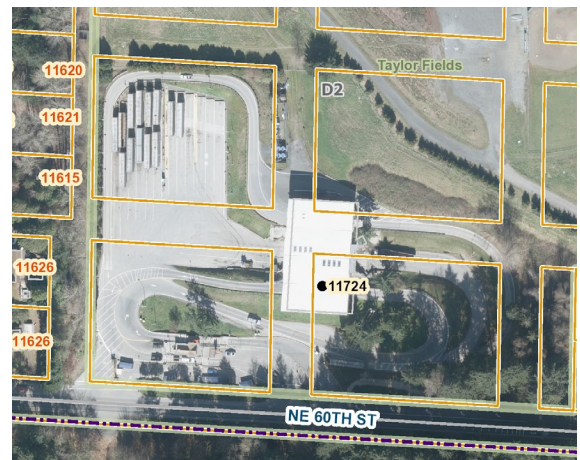
Site 8: Mini Storage



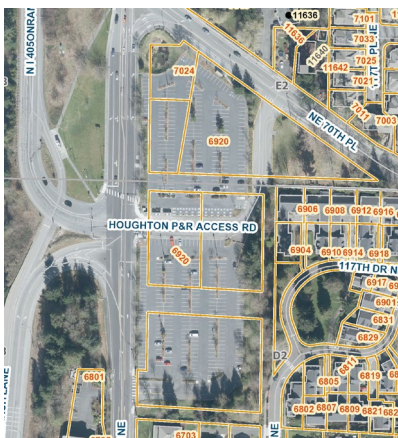
This 23.9-acre site is located just to the west of Ford of Kirkland on 124th Avenue NE and is a combination of three parcels. The current use is retail and office space, with a mini storage located on the northern two parcels. The site is located at the core of the Totem Lake urban center and conflicts with future economic development. The development of the property as a transfer station also conflicts with the transportation goals in the City *Comprehensive Plan* and would contribute to traffic congestion in the area. The property acquisition cost is significant given its assessed value of approximately \$39.8 million.

Site 11: Houghton Transfer Station and Landfill

This site is the current location of the HTS. The footprint of the station is about six acres in size, but the footprint of a new station could extend out into the closed landfill area to the north, which is over 30 acres in size. The station is surrounded on three sides by residential homes and the Bridle Trails State Park to the south. A new station would require transportation and pedestrian improvements on NE 60th Street and at the three-way stop intersection at NE 60th St and 116th Avenue NE. There is an elementary school located to the east and the road shoulder is a walk route for school-aged children. The site offers decent freeway access. No property acquisition costs would be incurred because the transfer station property and closed landfill are owned by King County.



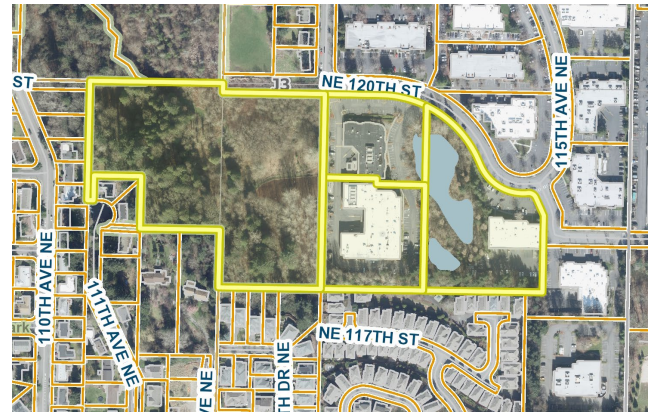
Site 12: Houghton Park and Ride



The Houghton Park-and-Ride property is about six acres and is owned by King County. It does not meet the KCSWD's preferred transfer station parcel size standard, which is at least eight acres. However, the parcel is similar in size to the North Seattle Transfer Station where trailers and compaction machinery are staged under the facility. The site may be cost-prohibitive relative to other sites because the construction would require significant excavation. The site offers excellent freeway access and is abutted by some residential properties on the south and southeast sides. A new station located at this site would displace the park-and-ride and would impact the availability of public transportation.

Site 13: Heronfield

This 8.5-acre site is a combination of four parcels and is located in the Totem Lake area west of the Kirkland Justice Center and Fred Meyer. This property includes large wetland and critical areas with wildlife, has a high risk of landslide, and would be a significant change in use. Residential properties abut the site on the south and west sides. Medical offices inhabit the middle two parcels. The Jasper Dog Park is located on the eastern portion of the westernmost parcel. There is reasonable freeway access from NE 124th Street to the north but the station would add to traffic congestion.



NEXT STEPS:

The KCSWD is in the process of rating and ranking the top 15 sites to reduce the number of sites to five finalists in early 2021. The reduction to five sites will be influenced by the community criteria developed by the SAG as well as the established functional, broad area screening, and functional criteria. The final site is anticipated to be selected by the King County Executive in late 2022 after the conclusions of the EIS process in 2021/2022. Kirkland consistently has requested that King County take measures to streamline and expedite the siting process as much as possible because construction costs continue to rise and there is a finite number of viable and realistic sites in the service area.

Attachment A: NERTS Supplemental Materials

Attachment B: PowerPoint Slides: Northeast Recycling Transfer Station Project (by King County)

Northeast Recycling and Transfer Station Update

Summary of Contents

Project Timeline. Provides a timeline for work to be done by King County and its consultants, the Core Cities group, the Siting Advisory Group, and the community through February 2021.

Study and Service Area Map. Shows the study area in which NERTS will be sited and the service area for the new station which includes cities outside the study area.

NERTS Fact Sheet. Provides details on the project timeline, the compositions of the Siting Advisory Group (SAG), and the SAG's role in the process.

Siting Advisory Group Charter. Provides details on the SAG's purpose, responsibilities, guiding principles, and communications.

NERTS SAG Meeting Schedule. Provides the SAG meeting schedule through June 2021.

NERTS SAG Roster. Lists the current list of 21 participants on the SAG which includes city representatives and members of the public from the cities of Kirkland, Redmond, and Woodinville and unincorporated King County.

Top 15 NERTS Sites Map. Provides a visual representation of the 15 NERTS sites under consideration by King County. The numbers on the map correspond with the sites listed on page 4 of the staff report.

Siting Criteria. Provides a summary of the pass/fail, GIS, broad area site screening, and functional criteria used by King County to filter and rate potential transfer station sites.






Tour of the Factoria Transfer Station. This slide deck is authored by Andreas Kolshorn, a stakeholder on the SAG, and provides information on the layout and attributes of the Factoria Recycling and Transfer Station in Bellevue.

Attachment A

Share SAC 2 topics																																				
	July				August				September				October				November				December				January 2021				February 2021							
	Wk 1	Wk 2	Wk 3	Wk 4	Wk 1	Wk 2	Wk 3	Wk 4	Wk 1	Wk 2	Wk 3	Wk 4	Wk 1	Wk 2	Wk 3	Wk 4	Wk 1	Wk 2	Wk 3	Wk 4	Wk 1	Wk 2	Wk 3	Wk 4	Wk 1	Wk 2	Wk 3	Wk 4	Wk 1	Wk 2	Wk 3	Wk 4				
Technical Work	GIS search to develop universe of possible sites				Refined GIS analysis to identify 15-20 potential sites				Broad Area Site Screening (BASS) analysis of 15-20 sites to narrow to top 5. Visit sites, conduct additional GIS analysis and property analysis, apply functional criteria								Draft top 5 sites		Identify top 5 sites		Begin scoring top 5 against Functional Criteria				Weight Functional Criteria. Refine and apply criteria. Score sites				Develop final ranking		Develop Draft Focused Site Screening Report		Prepare Final Focused Site Screening Report			
Core Cities	Public involvement site screening process		Brief city councils		Universe of sites SAC membership Public Involvement Plan				SAC 1 topics				Share top 5 sites, SAC 2 topics				Share SAC 3 topics				Holiday week		Share SAC 4 & 5 topics				Share SAC 6 topics									
Siting Advisory Committee	Recruit & convene Siting Advisory Committee (SAC)								SAC Kickoff introductions project info process SAC Tour		SAG 1 - BASS process, criteria discussion		SAG 2 - Present BASS results & proposed top 5 sites		Possible Site Tour with SAC		SAG 3 - Present any site changes, finalize community criteria		Holiday week		SAG 4 - Apply & weight criteria, recommend site ranking		SAG 5 - Review project team screening results and site ranking		SAG 6 - Facility Programming											
Community	Stakeholder interviews to inform Public Involvement Plan				Seek values to inform community criteria. Share 15-20 identified sites. Solicit information about other potential sites.				Project Kickoff informational				Solicit information about other potential sites. Refine community criteria				Share top 5 sites				Holiday week		Share draft ranking of top 5 sites. Solicit input				TBD									






Attachment A

Northeast Recycling and Transfer Station
Study Area / Service Area

-  Study Area for Northeast Recycling and Transfer Station
-  Service Area
-  Incorporated Areas
-  Urban Growth Boundary
-  King County Boundary








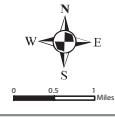
Estación de transferencia y reciclaje del noreste
Área de estudio / Área de servicio

-  Área de estudio para la estación de transferencia y reciclaje del noreste
-  Área de servicio
-  Áreas incorporadas
-  Límite para desarrollo urbano
-  Límite de King County








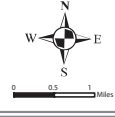
東北區廢品回收中轉站
研究區/服務區

-  東北區廢品回收中轉站研究區
-  服務區
-  合併地區
-  城市空間增長邊界
-  金縣邊界








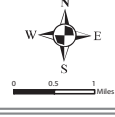
पूर्वांतर रिसाइकलिंग और स्थानांतरण स्टेशन
अध्ययन क्षेत्र / सेवा क्षेत्र

-  पूर्वांतर रिसाइकलिंग और स्थानांतरण स्टेशन के लिये अध्ययन क्षेत्र
-  सेवा क्षेत्र
-  शामिल क्षेत्र
-  शहरी विकास की सीमा
-  किंग काउंटी की सीमा








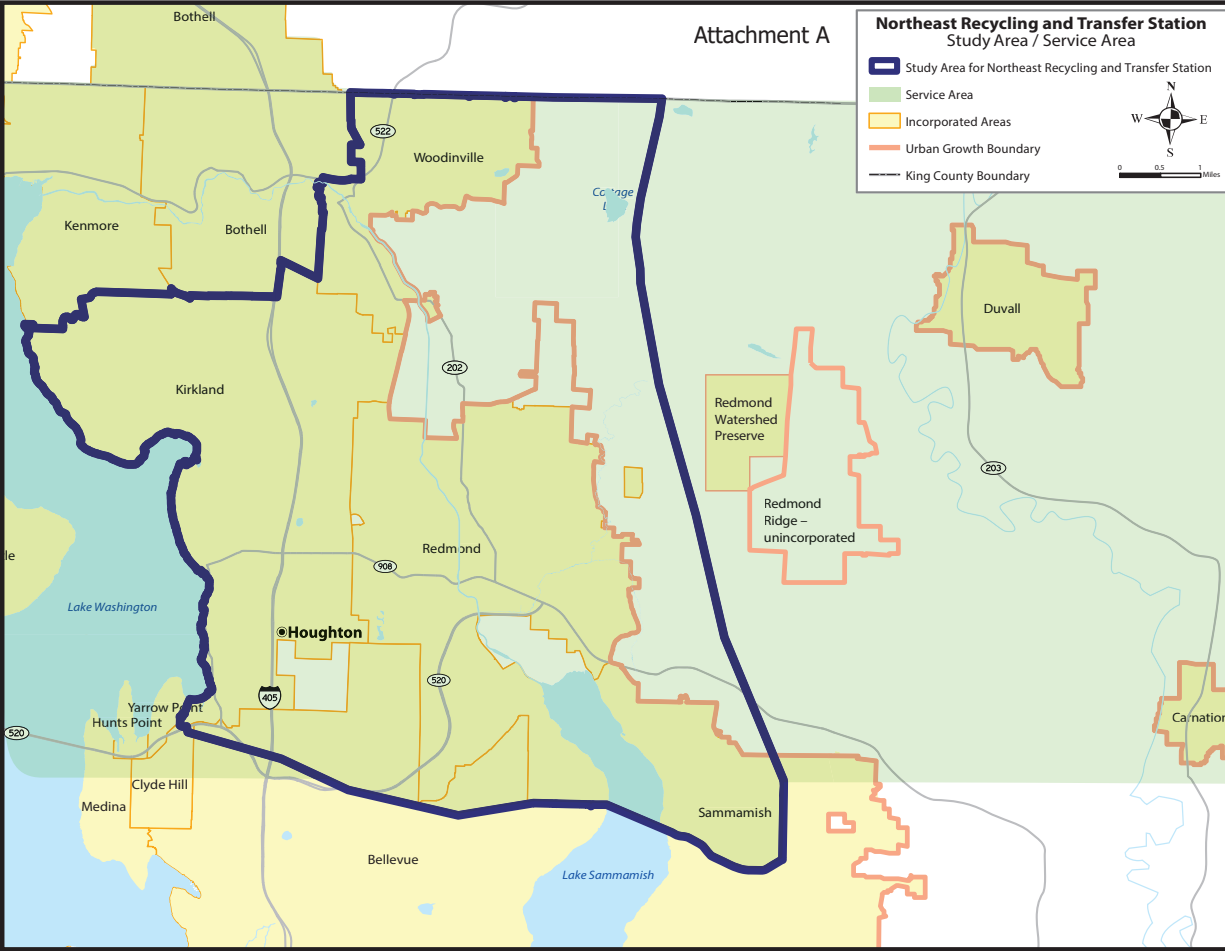
東北區廢品回收中轉站
研究區/服務區

-  東北區廢品回收中轉站研究區
-  服務區
-  合併地區
-  城市空間增長邊界
-  金縣邊界



Северо-Восточная станция приема отходов, подлежащих вторичной переработке.
Зона, на территории которой планируется разместить станцию / Район обслуживания

-  Зона планируемого размещения Северо-Восточной станции приема отходов, подлежащих вторичной переработке.
-  Район, который обслуживает станция.
-  Муниципальные образования.
-  Границы городского роста.
-  Граница округа Кинг.



Northeast Recycling and Transfer Station Siting Advisory Committee

King County is planning a new garbage and recycling transfer station to serve the growing Northeast King County area when it opens in 2027. It will replace the aging and limited [Houghton Station](#), which was built in the mid-1960s. Locations in Kirkland, Redmond, Sammamish, Woodinville and parts of unincorporated Northeast King County are all being considered for the new, modern facility. The location of the new station has not been determined yet. King County decided the need for the new station in the [2019 Comprehensive Solid Waste Management Plan](#).

With the help of communities in Kirkland, Redmond, Sammamish, Woodinville and areas of unincorporated Northeast King County, King County will site, design and build the new station. King County will choose a location that benefits the local community as well as current and future users. King County is recruiting members for a Siting Advisory Committee (SAC). The SAC will give advice to the County on community interests, values and concerns as the county seeks a site for the new station.

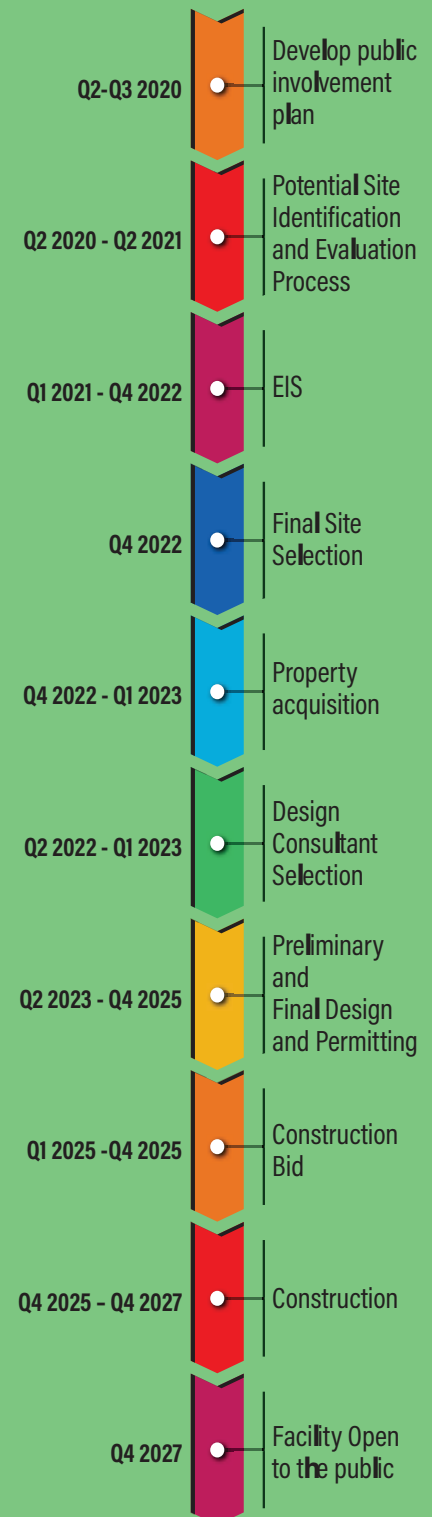
Siting Advisory Committee

The Siting Advisory Committee (SAC) is a community-based committee that will advise King County on how and where to site the new station. The committee will have up to 28 members. King County will appoint 22 members from government agencies, non-profit groups, businesses, and interest groups in the siting areas. The six remaining seats will be open for interested community members to apply.



Factoria Recycling and Transfer Station

Preliminary Project Schedule Siting through Construction



Project Manager

Margaret Bay, 206-263-5851
mbay@kingcounty.gov



King County

Department of
Natural Resources and Parks
Solid Waste Division

What will members of the SAC do?

Members of the SAC will meet regularly to learn about the siting process. The SAC will give input to King County about possible locations and design of the new station. SAC members will be expected to share information about the process with their communities. And finally, SAC members will listen to community concerns and hopes and share them with the county throughout the site selection process.

How often will the SAC meet?

The SAC will meet at least 10 times between mid-October 2020 – December 2022, or more often as needed, as King County evaluates potential sites for the new station. Due to Covid-19, all meetings are currently planned to be held virtually. SAC members should plan to attend the kick-off meeting and the meetings on the dates listed below. Only the time of the kick-off meeting has been set. All other meetings dates and times have yet to be determined.

- Kick-Off: Oct. 14, 2020, 6:30-8:30 p.m.
- Meeting #1: Oct. 28, 2020
- Meeting #2: Nov. 18, 2020
- Meeting #3: Dec. 16, 2020
- Meeting #4: Jan. 27, 2021
- Meeting #5: Feb. 3, 2021
- Meeting #6: March 3, 2021
- Meeting #7: March 31, 2021
- Meeting #8: April 28, 2021
- Meeting #9: May 26, 2021
- Meeting #10: June 23, 2021

The County seeks to create a siting advisory committee that represents the diversity of our community, and encourages people from Black, Indigenous, and immigrant communities, and people with disabilities to apply. In-language interpretive services and accommodations for people with disabilities will be made available to enable full participation by people who reflect the diversity of the community. Financial support is available for individuals or organizations representing historically underserved communities. Accessibility resources will be provided to members as needed.

For more information

Visit the website at kingcounty.gov/northeast or call 206-477-4466 for more information.

Alternate formats
available upon request
206-477-4466, TTY
Relay:711



October, 2020



Rooftop solar panels at Bow Lake Recycling and Transfer Station



Skylights and translucent windows at Bow Lake Recycling and Transfer Station



Stockpile of untreated wood for recycling at Factoria Recycling and Transfer Station



Scrap metal recycling Bow Lake Recycling and Transfer Station



Siting Advisory Committee Charter – Draft Northeast Recycling and Transfer Station

Background

King County has identified the need for a new transfer station in Northeast King County to meet the demands of a growing population and manage aging infrastructure. The communities in or around the cities of Sammamish, Kirkland, Redmond, and Woodinville have a vested interest in the siting, design and development of this new transfer station; therefore, they play a key role as the County moves forward with the project. The County convened the Siting Advisory Committee (SAC), an advisory group composed of members representing a variety of interests and perspectives in Northeast King County, with special emphasis on members who represent historically underserved and underrepresented communities.

Purpose

The purpose of the Siting Advisory Committee (SAC) is to help develop and apply site selection criteria, identify community concerns and impacts, create public awareness of the project, provide general review and input, and express opinions and preferences to King County decision-makers. The SAC brings together stakeholders and community representatives to provide feedback and input, and express community concerns and opinions to County decision-makers. The committee also exists to be a conduit of information between the County and community members.

Roles and Responsibilities

Siting Advisory Committee members

Advise King County staff from a community perspective

- Identify community criteria for screening sites
- Share information with their community and share their feedback about concerns and impacts
- Provide King County with feedback about the siting process and outcomes
- Provide King County staff with outreach advice such as reviewing materials and identifying additional groups to contact
- Review potential sites and provide feedback
- Participate in SAC monthly meetings

Facilitator

Ensure fair and open meetings

- Facilitate discussion among participants
- Enable all participants to be heard
- Employ tools and techniques that allow participants to express preference while respecting disparate views
- Ensure meetings are effective and efficient
- Emphasize relationship-building between SAC members and King County



Siting Advisory Committee Charter – Draft Northeast Recycling and Transfer Station

King County Solid Waste Division staff

Provide information and listen carefully to SAC feedback

- Host SAC meetings
- Provide information to the SAC in an understandable and timely fashion
- Prepare presentation materials, handouts and meeting notes
- Offer clarity about decision-making processes and community influence
- Approach community feedback with openness and transparency
- Solicit feedback and answer SAC member questions

Guiding Principles and Norms

- Foster safe and inclusive conversations by acknowledging and centering historically underrepresented and underserved communities
- Apply creative thinking grounded in equity
- Practice inclusivity and equity by considering access, language, meeting times and availability of technology, among other factors
- Consider ways to open SAC processes and community engagement practices to help establish trust
- Make space for differing concerns, perspectives and opinions
- When making comments, consider time needed for others to share their thoughts and perspectives
- Make effort to come to meetings prepared to participate actively

General Operating Procedures

Meetings

We will meet at least 10 times between mid-October 2020 – December 2022, or more often as needed, as King County evaluates potential sites for the new station. Meetings will be scheduled at a time and place that is convenient to most members and the community. King County will ensure that meetings are open to the public and accessible to all. King County will provide needed accommodations under the Americans with Disabilities Act or Civil Rights Title VI when requested.

Agreements

We agree to hold ourselves accountable to:

- Listen, believe, and reflect. We will avoid interrupting when we disagree. Instead, we will attempt to listen until we understand.
- Accept non-closure for the moment.
- Speak our own truths with compassion.
- Value and celebrate each other's experiences.

Siting Advisory Committee Charter – Draft Northeast Recycling and Transfer Station

- Come with open hearts and open minds to help us explore possibilities. We will embrace mistakes and forgiveness so that we can all take risks, learn, and do better.
- Make space, then take space; be concise. Everyone should have the space and opportunity to share their ideas.
- Bring our best thinking into the room.
- Attack the problem, not the person.
- Acknowledge, explore and address disagreement, frustration and differences of opinion.
- Attend to impact. Good intentions can still cause harm. When someone is hurt, focus on listening and understanding the impact.

Communications

Members agree that open communication is essential to all deliberations. Members will copy the facilitator on all communications from or to interest groups commenting on the SAC's deliberations. Members will avoid characterizing the views or opinions of other SAC members outside of any SAC meeting or activity.

We, members of the Siting Advisory Committee, and King County staff will be working closely together to ensure our work is meaningful, useful and reflects our community's values to the fullest extent. We may need to adjust this charter, our guidance document, as our work matures. We commit to: revisit the charter as needed to ensure it is still guiding us to support and reflect our community's needs and interests; to be open about our work and our outcomes; and, to provide the King County decision-makers with advice that fully reflects our committee.



November 5, 2020

NERTS Siting Advisory Group (SAG) Schedule

SAG Convening Plan Development (complete) 6/18/20 – 8/21/20

Membership Criteria and Recruitment 7/29/20 – ongoing

Siting Advisory Group (SAG) 10/13/20 – 6/23/21










- 10/14/20 SAG Kick-Off Meeting
- 10/23/20 SAG Tour
- 10/28/20 SAG Meeting 1 (Process & Criteria Development, Review 15-20 Sites)
- 11/18/20 SAG Meeting 2 (Review Top 5 Sites)
- 12/16/20 SAG Meeting 3 (Refine & Finalize Community Criteria; Site Update)
- 1/17/21 SAG Meeting 4 (Community Criteria Weighting)
- 2/3/21 SAG Meeting 5 (Final Site Ranking)
- 2/2/21 SAG Meeting 6 (Facility Programming/Environmental Review)
- 3/31/21 SAG Meeting 7 (Facility Programming/Environmental Review)
- 4/28/21 SAG Meeting 8 (Facility Programming/Environmental Review)
- 5/26/21 SAG Meeting 9 (Facility Programming/Environmental Review)
- 6/23/21 SAG Meeting 10 (Facility Programming/Environmental Review)

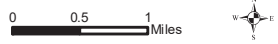
NERTS Siting Advisory Committee – 11.1.20

#	Name	Organization	Location
1	Aaron Moldver	City of Redmond	Redmond
2	Amrit Bhuie	AR Environmental Consulting	Woodinville
3	Andreas Kolshorn	Resident	Woodinville
4	Chuck Price	City of Woodinville	Woodinville
5	Dave Juarez	City of Redmond	Redmond
6	Diana Hart	City of Woodinville	Woodinville
7	James Randolph	Resident	Kirkland
8	Jed Reynolds	Lake Washington School District	Full Area
9	John MacGillivray	City of Kirkland	Kirkland
10	Kent Kronenberg	Republic Services	Full Area/Kirkland
11	Kristina Hudson	One Redmond	Redmond
12	Leslie Miller	Resident	Kirkland
13	Nick Harbert	Waste Management	Full Area
14	Quinn Apuzzo	Recology	Full Area
15	Ronald Kim	Resident	Kirkland
16	Sandy Cobb	Unincorporated King County/Redmond Ridge	Unincorporated King County
17	Susan Vossler	Resident	Kirkland
18	Tom Vaughn	DTG Recycling	Full area/Redmond
19	Tracey Dunlap	City of Kirkland	Kirkland
20	William Louie	Resident	Redmond
21	William Su	Resident / Equity & Social Justice	Kirkland

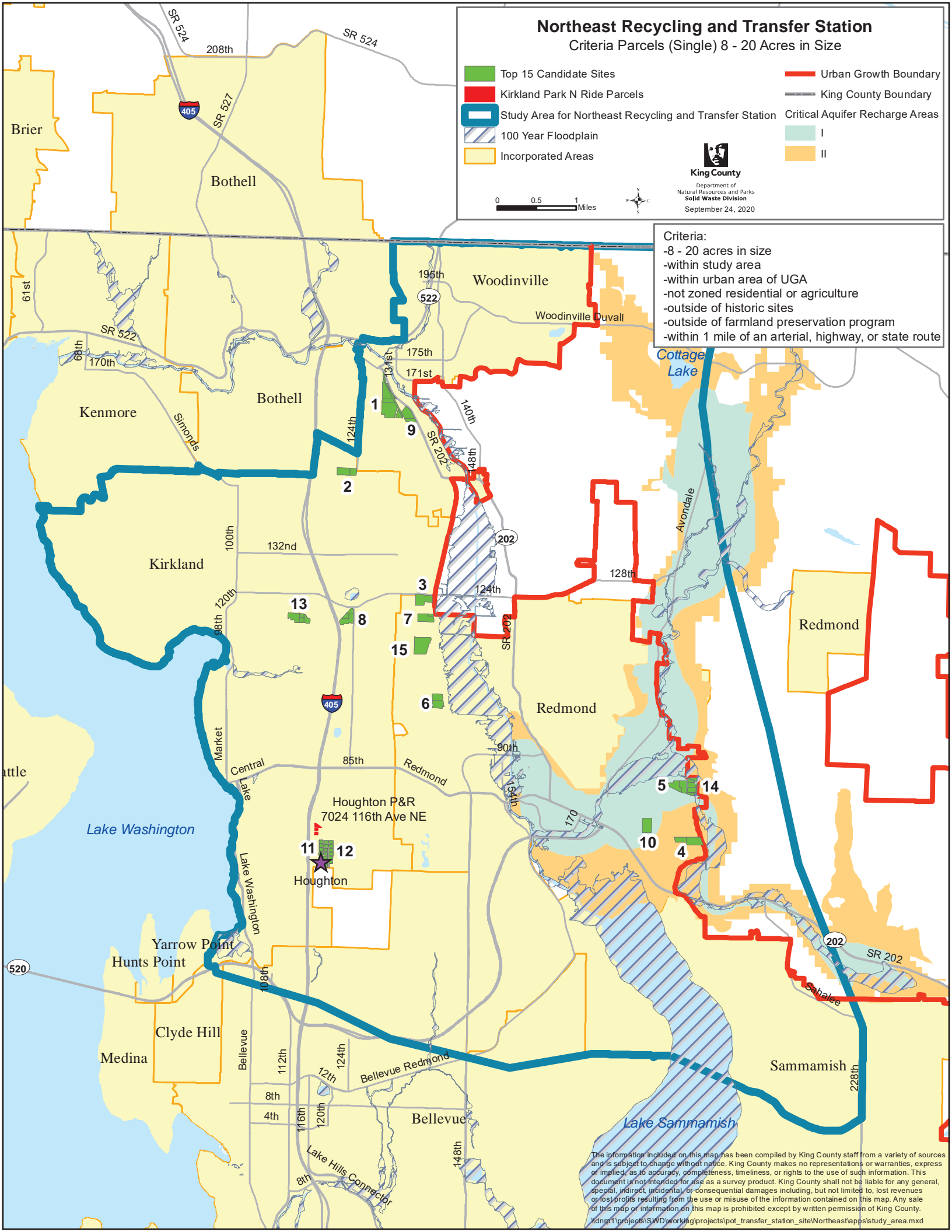
Northeast Recycling and Transfer Station

Criteria Parcels (Single) 8 - 20 Acres in Size

	Top 15 Candidate Sites		Urban Growth Boundary
	Kirkland Park N Ride Parcels		King County Boundary
	Study Area for Northeast Recycling and Transfer Station		Critical Aquifer Recharge Areas
	100 Year Floodplain		I
	Incorporated Areas		II



Criteria:
 -8 - 20 acres in size
 -within study area
 -within urban area of UGA
 -not zoned residential or agriculture
 -outside of historic sites
 -outside of farmland preservation program
 -within 1 mile of an arterial, highway, or state route



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Draft Siting Criteria

This document provides an initial draft of proposed criteria to be used to identify the most suitable site for development of the King County Northeast Recycling & Transfer Station (NERTS). The criteria are organized into three distinct type of criteria.

1. Pass/Fail Criteria and GIS filters to identify an initial 15-20 sites
2. Criteria used in the Broad Areas Site Screening to reduce from 15-20 sites to five
3. Functional criteria to be used to compare sites during the Focused Site Screening

In addition to these criteria, community criteria will be developed later with the Siting Advisory Committee for use during the Focused Site Screening.

1. NERTS Pass/Fail Criteria and GIS Filters to Identify 15-20 Sites

1.1 Pass/Fail Criteria

Based on the mission, vision, and values of King County, these Pass/Fail criteria, also called exclusionary criteria, establish minimum standards that must be met to qualify for further consideration. These criteria will be used to identify a possible universe of sites.

- PF1. Site is within the study area (as depicted in the 2019 SWD Comprehensive Plan).
- PF2. Site is within the contiguous Urban Growth Area.
- PF3. Site is located outside of a FEMA defined 100-year flood plain.
- PF4. Site is free of known historical, archeological, or cultural designations.
- PF5. Site is not designated as farmland preservation

1.2 GIS Criteria

These GIS filters will be used along with the Pass/Fail criteria to identify approximately 15-20 sites for further analysis.

- GIS1. Site is at least 8 acres in size or a combination of smaller parcels totaling at least 8 acres.
- GIS2. Site is not zoned agricultural or residential.
- GIS3. Site is within 1 mile of a major arterial or highway with appropriate truck routes (this criterion may be refined after analysis).
- GIS4. Property cost is within project budget (based on assessed value).
- GIS5. Parcels designated as park or open space that meet other criteria will be reviewed to assess any potential opportunity.

2. Criteria Used in the Broad Area Site Screening from 15-20 Sites Down to Five

During the Broad Area Site Screening, the following criteria will be considered to develop a short list of five sites for evaluation during Focused Area Site Screening.

- BASS1. Appropriate site characteristics (size and shape accommodate the required features of a modern transfer station facility).

- BASS2. Few negative environmental considerations that cannot be mitigated (e.g., sites with sensitive environmental areas such as steep slopes, large wetlands, heavily wooded, or other environmental issues).
- BASS3. Few on-site property improvements that would require relocation (the presence of active on-site businesses or uses requiring relocation will make development more expensive and disruptive).
- BASS4. Relatively few nearby sensitive receptors (such as schools, parks, residences and hospitals).
- BASS5. No equity or social justice concerns.
- BASS6. Site can be developed with minimal known geotechnical concerns (including geohazards, landslides, seismic).
- BASS7. Any site located within an aquifer recharge zone will be noted for further assessment.

3. NERTS Functional Criteria

These functional criteria provide guidance on optimal engineering, operating, and transportation conditions. It is unlikely that any one site will meet all functional criteria. Rather, each criterion's relative importance must be considered in order to identify the best site.

F1. Site Shape, Size, and Characteristics

- F1.1 Site is approximately 10 – 20 acres (not necessarily a single parcel), has sufficient space to meet future level of service criteria, and has capacity for expansion to enhance sustainable and advanced materials management.
- F1.2 Site topography is conducive to the typical layout of a transfer station, such as gently to moderately sloping with opportunities for a loadout level, without the need for high retaining walls or unusual ramp requirements.
- F1.3 Site has limited impact to critical areas:
- Site can be developed with minimal impact to known critical areas (e.g, wetlands, wildlife habitats, steep slopes, critical aquifers).
 - Critical areas are below thresholds set by the Living Building Challenge under Imperative 01, Ecology of Place (pristine greenfield, wilderness, prime farmland, floodplain and thriving vibrant ecological environments and habitats).
 - Critical area impacts can be easily (and inexpensively) mitigated, provide an opportunity for restoration of degraded habitat or ecosystem function (LBC 4.0 Imperative 01, Ecology of Place), or contribute to ecological restoration efforts to reconnect or strengthen habitat corridors.
- F1.4 Site has no known geotechnical or remediation risks, including slope instability, that pose a substantial risk of development cost increases.
- F1.5 Site has the potential for multiple access points.
- F1.6 Site provides an opportunity for an added community amenity and would have capacity to provide it (e.g., pocket park/playground).
- F1.7 Site has potential for clean power generation:
- No environmental features that would compromise solar exposure (e.g. nearby shading slopes that prevent the optimization of solar PV energy potential).
 - Geothermal (e.g., soils that support ground source heat exchange).
 - Wind power.
- F1.8 Previously developed sites with the potential for reuse or repurposing of buildings, foundations or slabs that can reduce project embodied carbon emissions.

F2. City Economic Impact / Zoning

- F2.1 Site is appropriately zoned, consistent with local area land use plans, and compatible with surrounding land uses.
- F2.2 Site would not require extensive/ expensive effort related to current tenant relocation.
- F2.3 Site does not have high current or future economic significance to the community.

F3. Location Does Not Impact Sensitive Off-Site Receptors

- F3.1 Active area would be approximately 100 feet or more from the nearest residence and there are relatively few residents within 1,000 feet of the property line.
- F3.2 Site is located approximately 1,000 feet or more from parks and schools.
- F3.3 Site is not proximate to an airport.

F4. Equitable Distribution of Facilities

- F4.1 Site is near the population centroid of the Northeast study area.
- F4.2 Site provides equitable distribution of social impacts so that no racial, cultural, or socio-economic group is unduly impacted.

F5. Transportation

- F5.1 Potential off-site traffic impacts from facility operations can be minimized and/or mitigated.
- F5.2 Site is within approximately one-half mile of a freeway/state highway or a major arterial through appropriately zoned neighborhoods.

F6. Cost and Utilities

- F6.1 Utilities are readily accessible.
- F6.2 Site cost is within budget for the project.
- F6.3 Site can be confidently acquired or purchased.

Factoria Recycling and Transfer Station Tour

11/10/2020

By Andreas Kolshorn



Introduction

Recently I had the opportunity to tour the Factoria Recycling and Transfer Station (Factoria RTS) as part of the North Eastern Recycling Transfer Station (NERTS) Site Advisory Group (SAG). I am participating as an at-large volunteer member. The goal of the tour was to learn about the type of facility with which King County would like to replace the aging Houghton Transfer Station.

We met as group of 5 people led by the Factoria Operations Supervisor (OS) Joseph Newton. This occurred on 10/23/2020 at 11 AM on cool rainy day and continued to about 12:30 PM. Given the ongoing pandemic, we observed distancing protocols and wore masks along with normal safety gear. Much of the tour was in an outdoor like environment. Tour facilitators were very helpful and candid. Additional thanks for feedback and photos from James Randolph, at-large volunteer member.

This document is from my notes and cell phone photos. The purpose is to provide a quick reference for those unable to make one of the tours. It mostly follows the order of the tour. For convenience this PDF has a table of contents sidebar, optionally available.

My Notes

Key Takeaways

Facility is on a 15.6 acres site.

Main processing area is 80,000² ft in size.

Daily Factoria ships 20-25 loads to Cedar Hills landfill, with each load weighing 26-28 tons.

Main processing area uses a “flat floor plan”. This is a large open space on one upper-level with few permanent boundaries.

High-pressure compactors on the lower-level are essential to operations that fill specialized hauler trucks.

There is a tradeoff between having more compactors and needing fewer hauler drivers to make trips to Cedar Hills dump.

Interior of Site

Ideally for the needs of this facility, the main processing area would be 15-20K² ft larger.

Floor layout continues to evolve since initial opening. This out of necessity and design.

A larger processing area would improve traffic flow, customer safety and allow more recycling options.

More space would allow more customer services to be offered.

Facility handles commercial and consumer waste, deposited in two areas on 80,000² ft common floor.

Recycling waste is also deposited in designated areas on the common floor.

Exterior of Site

100K plants including drought tolerant. All plants are native to the area.

Art display incorporated into retaining wall using reflective bicycle like wheels that shimmer in sunlight.

1 million cubic yards of dirt was excavated to build the site.

Sidewalks made of porous recycled concrete.

Upper windows made of recycled plastic.

Facility is Leeds certified.

Two 500,000-gallon water tanks catch runoff. Filtered and used for plants and toilets. Saves us 1.1 million gallons per year.

Safety

Site is self-contained meaning there are catchment systems for possible liquid spills, particularly in HazMat area.

HazMat area has kits to identify many hazardous materials.

HazMat area has fire suppression systems.

Safety is an important consideration given the noise, size, heavy equipment, cars and mix of customers.

Random Observations or Comments

Plastics are a big problem in the waste stream at this facility.

“Light and Fluffy” items in the trash mix like kid’s plastic toys, make it harder to compact.

Saw a couple of mattresses dumped off along with other materials that could be recycled.

Does not appear to be any mechanism for sorting out recyclable materials dropped off in the non-recycling areas.

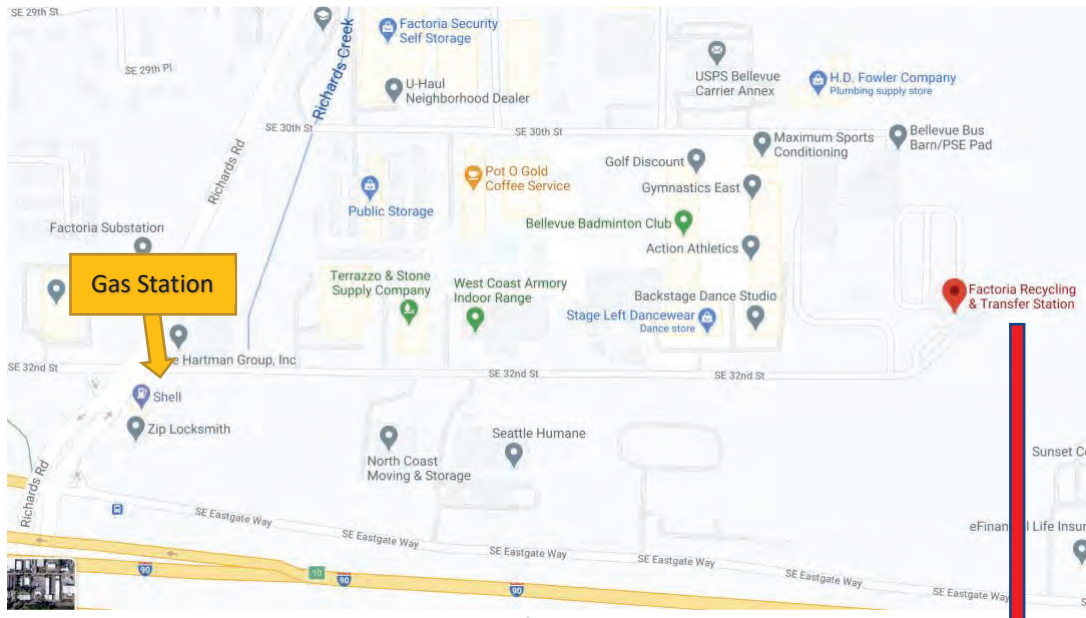
There are service peaks and valleys in load drop-offs. Early morning, mid-morning, and noon tend to spike.

At times when facility is operating at capacity, small glitches can cause large processing backups.

Distance between transfer station and I-90 W is less than ½ mile.

Little continuous or heavy traffic on most of the route between I-90 and station, so more efficient customer access.

Factoria RTS Location & Layout



- Gas Mart used by Factoria RTS customers. Handy amenity.

Figure 1 Map View Factoria Recycling and Transfer Station. 13800 SE 32nd St, Bellevue, WA 98005.



Figure 2 Ariel View of Factoria Recycling and Transfer Station.

Front Views



Figure 3 Commercial truck waste drop-off access area. View is from on-site sidewalk near facility's main entrance and scale plaza.



Figure 4 Panoramic view (distorted) of front door entrance portico extending to visitor parking and retainer wall.

- Some of the 100K onsite plants brought in can be seen to the right.
- Plants and toilets use water from onsite rain catchment and filtration system.
- Upper level windows sourced from recycled plastic.
- Sidewalks use recycled water permeable concrete.
- On retainer wall is an art installation made of bicycle wheel like disks that shimmer colors on sunny day.

Hazardous Materials Station



Figure 5 Hazardous waste drive thru drop-off station.



Figure 6 Sorting area inside the garage door.

- Unloading area handles 85-125 people per day during peak seasons.
- Hazardous waste building is self-contained.
- Spill mitigation drains liquid into holding tanks.
- Testing is available for unidentified substances.
- Facility takes solid and liquid wastes.

- Cleaning supplies identifiable by barcode are consolidated and given to Habitat for Humanity.

Recycling Stations



Figure 7 Bins for dropping of various materials. A Goodwill clothing bin in back!



Figure 8 Appliance sign uses a base made from a creatively repurposed car wheel rim.

- Customers drive into facility on the main floor.
- They self-sort materials into bins by type.
- Traffic appeared to support a single line of cars.
- No backup observed. Low volume of cars during tour.
- No fee for recycling service.
- Wonder if there are cycles by type of item dropped off?



Figure 9 Lots of pallets today, also in dumpster above.

Consumer Waste Drop-Off



Figure 10 Consumer Garbage Drop-off.

- Recycling area is to left of this picture.
- Yard waste to right of this picture.
- Tire drop-off, back left near yellow box.
- Commercial truck entrance, back right.
- Consumer drop off, behind orange divider.
- The large size of facility and constant heavy equipment noise can make it a bit disorienting. This might deaden the senses to some hazards.
- It is not a place for children or pets that might jump out of vehicle.
- Upon entry one notices a slightly sweetish but not unpleasant odor.
- Odor varies during hotter months.

Houghton Style Drop-Off for Yard Waste



Figure 11 Yard waste drop-off and “old school” Houghton style compactor (yellow).

- At Factoria, used for yard waste only, you back up with vehicle and toss stuff over red marked edge and chain fence into an open-top truck parked below.
- The yellow machine in back is a “compactor” but really can’t compact so much as crush and level material.
- This compactor is not designed to compact with the 260-tons of force available in the new SSI 4500SPH waste compactor.

Some Reasons for Houghton Replacement:

- Current Houghton Transfer station can only use these yellow compactors.
- Houghton trucks carry a good bit of air with each load taken to the landfill. This is inefficient and wastes fuel.
- More loads require more drivers. Also puts extra wear on trucks and roads.
- Houghton style hauler trucks cannot be tightly sealed while driving down the road, potentially exposing road traffic to particulates.

Commercial Waste Drop-Off Area



Figure 12 Commercial waste drop-off truck entrance.

- Facility scale is deceptive since the clear foreground area is large enough for commercial trucks to turn around.
- In background the waste is piled at least 20 feet tall. Hidden, are holes where material is pushed into chutes going down to compactors on the lower level.
- There is an art to how the waste material is mixed so that an optimal load fills the hauler truck.



Figure 13 In foreground, consumer drop-off. In the middle, yellow front loader. In back, commercial drop-off.

- In this flat-floor plan a large front loader is used to move material.
- Front loader used to mix in material from consumer drop area.
- One must account for weight and density variations in the material.
- Construction material is usually heavier than consumer material like plastic toys, couches and mattresses.

Lower Level Service Pad



- Private onsite fueling station for waste hauler trucks and facility is seen in center of picture behind yellow bollards.

Figure 14 View North, from stairs onto lower level service pad and access road.



- White plastic windows, upper level use recycled materials.



Figure 15 View of back side of facility taken from NW corner service pad or where person in green vest is standing.



- Note special grab bar between rear wheels for compactor to hook and hold onto trailer during loading.

Figure 16 Specialized trash hauler trailer.

The SSI 4500 SPH Compactor



The SSI 4500 SPH:

- Bale size 7*7*34 ft
- Bale weight 30-35 tons.
- Compactor force 260 tons.
- Overall size 10*9*85 ft.
- Weight 192,000 lbs.

Factoria Stats:

- 20-25 loads/day to Cedar Hills.
- A truck carries 28-30 tons.
- Annual output 142K-234K tons or 8.5-13 million cubic feet¹.
- To create a pyramid made of Factoria's compacted waste would take about 7-10 years¹.



Figure 17 The 85-foot-long SSI 4500SPH compactor. View from bale output end. This mates to hauler trailer.



[SSI 4500 SPH Animation](#)
[YouTube Link](#)

[Specs - Vendor Site Link](#)



Figure 18 Hydraulic ram end of compactor and waste chute going up to the main floor (left).

Additional Systems



Figure 19 Looking at hydraulics room of the SSI 4500SPH.



Figure 20 Part of onsite catchment water filtration system.



Figure 21 Back-up compactor, the Harris TP-250.

Retention Wall and Scale Plaza



Figure 22 Retention wall and art installation of reflecting circles.



Figure 23 Entrance, exit and scale plaza

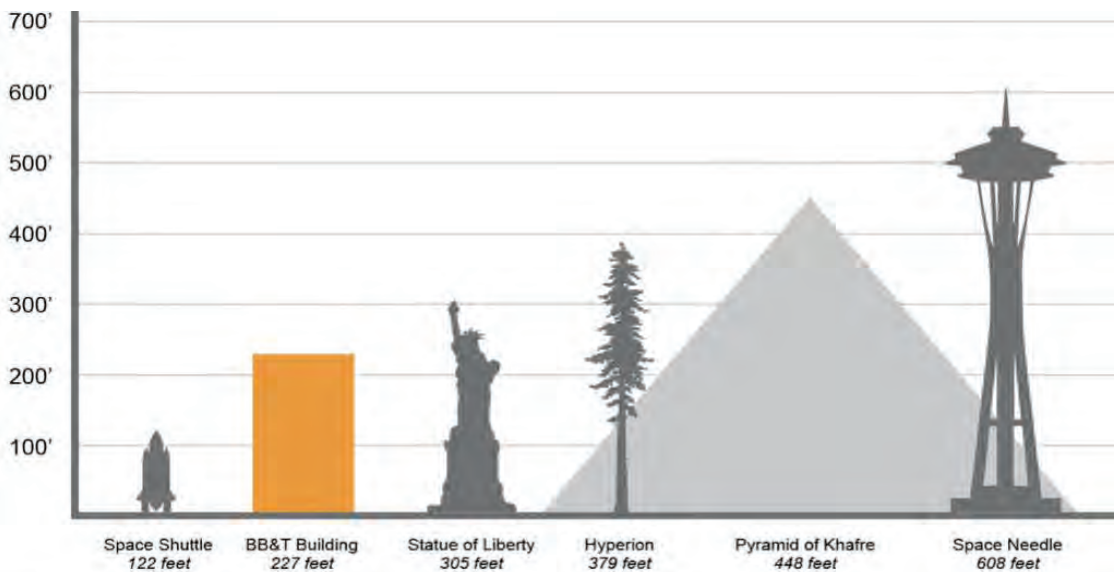
Footnote

(1) Sometimes it is helpful to convert large amounts of something into a more comprehensible frame of reference. Due to the use of the SSI 4500SPH waste compactor and its 260,000 tons of compression force, output from Factoria Recycling and Transfer Station takes the form of standard sized bales 34 feet in length. In a year laid end to end you're talking about 32-50 miles of bales. Enough to line the berm of I-5 all the way from Tacoma Dome to Seattle or Edmonds.

After these bales are delivered to Cedar Hills Landfill they are bulldozed and compacted into specially covered cells. Here, the annual contribution and proportion of individual bales is lost. A reference I find useful, even more so having visited them, are the Great Pyramids of Giza.

Using the dimensions of Khafre, the largest pyramid, and the typical size of an SSI 4500SPH waste bale, the following calculations show that you could create from Factoria waste a Khafre sized pyramid of waste in 7-10 years.

	Low Estimate	High Estimate
Daily loads of compacted waste leaving Factoria	20	25
Days per week loads are trucked to Cedar Hills Landfill	5	6
Weeks per year in operation	51	52
Total annual loads	5,100	7,800
Tons per load or bale produced at Factoria	28	30
Annual tons = Total annual loads * Tons per load or bale	142,800	234,000
Bale size from SSI compactor in cubic feet (7*7*34)	1,666	1,666
Annual volume in cubic feet = Total annual loads * Bale size	8,496,600	12,994,800
Volume of the Pyramid of Khafre in cubic feet = $(756*756*448)/3$	85,349,376	85,349,376
Years (rounded) to create a Khafre sized pyramid with Factoria waste bales	10	7
Tons of compacted trash in a Factoria based Pyramid of Waste	1,434,443	1,536,904



<http://www.urban-three.com/blog/2015/1/19/if-asheville-were-a-little-bit-taller-rc525>

Northeast Recycling & Transfer Station Project

Margaret Bay
Project Manager



King County

Department of
Natural Resources and Parks
Solid Waste Division

Waste Prevention • Resource Recovery • Waste Disposal

New capacity and service needs were outlined in Solid Waste Comp Plan

ATTACHMENT B

- The Houghton Transfer Station is 50 years old and at the end of its service life
- A new station planned to open in 2027 will offer more services and newer technology
- King County has begun the planning process starting with facility siting



The Houghton Transfer Station in Kirkland

Project Timeline

Siting through Construction

2020 - 2027

ATTACHMENT B

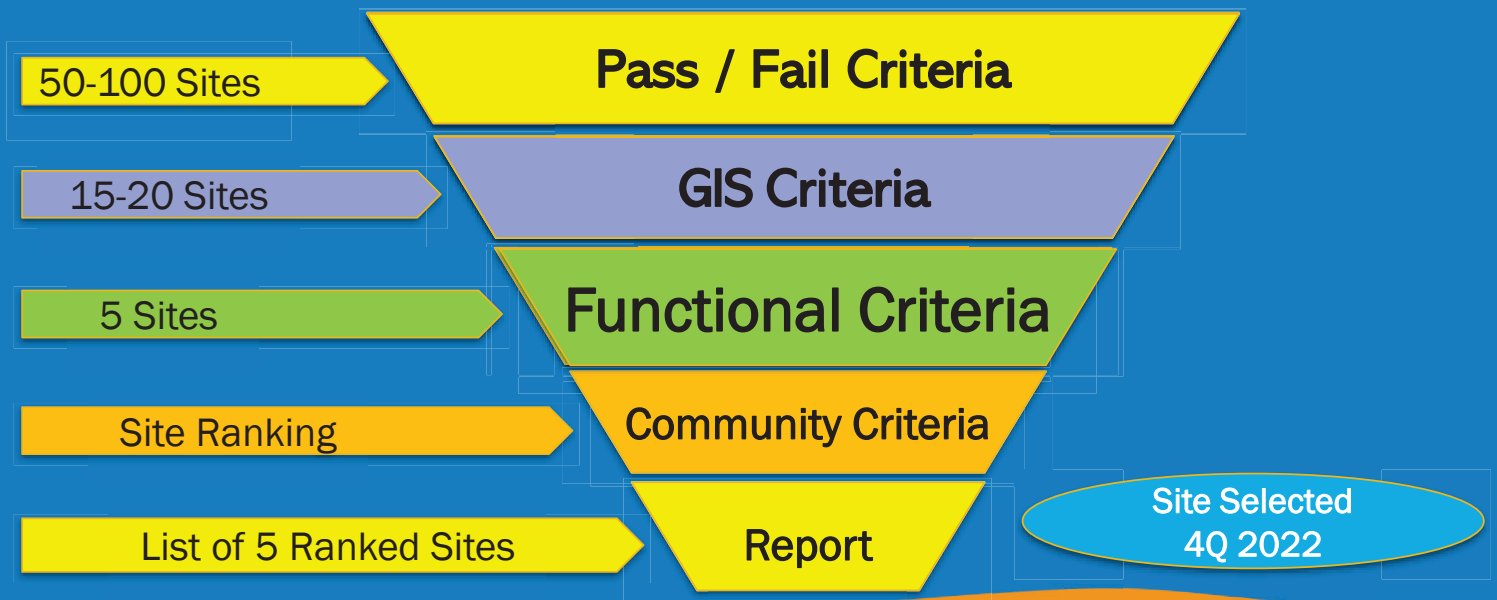


Siting Advisory Group

- Partner cities
- Historically under-presented communities
- Transfer station customers
- Haulers
- Small business interests
- Environmental groups
- School district
- At-large members

Station Siting and Public Engagement

ATTACHMENT B



Functional Criteria Development and Use

- Functional criteria developed in consultation with core cities and consultant team
- Will be used by project team to evaluate the top 5 sites
- Each site will be scored against each criterion
- Each criterion will be weighted according to the relative importance for site ranking
- Site scores will be multiplied by weights to develop an overall score used to rank each site

Functional Criteria

- 1: Site Shape, Size, and Characteristics
- 2: City Economic Impact / Zoning
- 3: Does Not Impact Sensitive Off-Site Receptors
- 4: Equitable Distribution of Facilities
- 5: Transportation
- 6: Cost and Utilities

Defining Community Criteria

- Community and SAG identify what is important about a station location (values and priorities)
- SAG considers input and identifies key values to use to assess locations
- SAG develops community criteria to be used for scoring sites

Questions?



King County
Department of
Natural Resources and Parks
Solid Waste Division

<i>Waste</i> Prevention	<i>Resource</i> Recovery	<i>Waste</i> Disposal
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