KING COUNTY
NORTHEAST RECYCLING AND TRANSFER STATION PROJECT

FINAL ENVIRONMENTAL IMPACT STATEMENT

King County
Department of Natural Resources and Parks
Solid Waste Division

Waste Prevention
Resource Recovery
Waste Disposal

www.kingcounty.gov/solidwaste

FINAL
ENVIRONMENTAL IMPACT STATEMENT

KING COUNTY
NORTHEAST RECYCLING AND TRANSFER STATION PROJECT

Prepared by

King County

King County Department of Natural Resources and Parks
Solid Waste Division
King Street Center
201 South Jackson Street, Suite 6400
Seattle, Washington 98104-3855

March 2025

Prepared in compliance with the State Environmental Policy Act, Revised Code of Washington 43.21C as amended, and its implementing rules, Washington Administrative Code 197-11.

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Fact Sheet

Project Title

Final Environmental Impact Statement (Final EIS); Northeast Recycling and Transfer Station Project

Nature and Location of Proposal

King County Solid Waste Division proposes to site, design, and build a modern transfer station in northeast King County to meet the region's growing demand for environmentally responsible waste management services. The new station will replace the aging Houghton Recycling and Transfer Station in Kirkland, which has been in service since the mid-1960s and does not have the capacity to offer the recycling and collection services customers increasingly need and want. The new facility will also make full recycling and waste disposal services more convenient for many customers in this area who currently must drive 30 minutes or more to reach a transfer station or drop box.

Proponent

King County Department of Natural Resources, Solid Waste Division (SWD)

Date of Implementation

Upon adoption by the County Executive of a preferred alternative, a Development Plan for the selected alternative will be prepared and funded by King County Council. The Solid Waste Division anticipates preparation of final design and subsequent construction of the selected alternative to be complete in 2029.

SEPA Responsible Official and Lead Agency

Pat D. McLaughlin, Division Director
King County Solid Waste Division

Contact Person

Mary O'Hara, Project Manager
King County Solid Waste Division
King Street Center, 201 S. Jackson Street, Suite 6400
Seattle, Washington 98104
206-263-2673

Email: northeast@kingcounty.gov

Potentially Required Permits and Approvals

U.S. Army Corps of Engineers (USACE)

Nationwide Section 404 Permit for Compliance with the Clean Water Act (CWA)

NOAA Fisheries

Magnuson–Stevens Fishery Conservation and Management Act Approval
Section 7 Endangered Species Act Compliance

U.S. Fish and Wildlife Service

Migratory Bird Treaty Act Compliance

Section 7 Endangered Species Act Compliance

Washington Department of Fish and Wildlife (WDFW)

Hydraulic Project Approval

Washington State Department of Ecology (Ecology)

National Pollutant Discharge Elimination System (NPDES) Construction Stormwater General Permit and Coverage

National Pollutant Discharge Elimination System (NPDES) Industrial Stormwater General Permit and Coverage

Section 401 Certification for Compliance with the CWA

Ecology; Public Health – Seattle & King County

Solid Waste Facility Operating Permit - Transfer Station (Solid Waste Handling Facility)

Solid Waste Facility Operating Permit – Moderate Risk Waste Handling Facility

Puget Sound Clean Air Agency (PSCAA)

Notice of Construction and Order of Approval

King County Council

Approval of Northeast Recycling and Transfer Station budget

King County Department of Natural Resources and Parks, Wastewater Treatment Division

Industrial Wastewater Discharge Authorization

City of Kirkland or City of Woodinville

Conditional or Special Use Permit

Demolition Permit

Grading Permit

Right-of-Way Permit

Construction Permit

Building Permit

Authors

King County Solid Waste Division

Herrera Environmental Consultants, Inc.

Jacobs Engineering Group Inc.

Date of Draft EIS Issuance

February 7, 2024

Date Draft EIS Comments Were Due

All comments were due no later than April 9, 2024.

Time and Place of Public Hearings

- Lake Washington High School: Wednesday, March 6, 2024, 6:00 p.m. to 8:00 p.m.
- Virtual via Zoom: Thursday, March 7, 2024, 6:00 p.m. to 8:00 p.m.
- Woodinville High School, Wednesday, March 13, 2024, 6:00 p.m. to 8:00 p.m.

Date of Final EIS Issuance

March 10, 2025

Final Document Availability

The Final EIS and appendices are available for review electronically on the project website at: www.kingcounty.gov/northeast. Hard copies of these documents are available at the King County Solid Waste Division, 201 S. Jackson Street, Suite 6400 Seattle, Washington 98104 or at the following locations:

- Kirkland City Hall
  123 5th Ave
  Kirkland, WA 98033
- Redmond City Hall
  15670 NE 85th St.
  Redmond, WA 98052
- Woodinville City Hall
  17301 133rd Ave NE
  Woodinville, WA

Date of Final Action

Expected in Spring of 2025

Subsequent Environmental Review

The Final EIS will be used, as appropriate, to satisfy State Environmental Policy Act, or SEPA, environmental review requirements for actions needed to implement the selected alternative. However, additional environmental review may be needed for some project actions, particularly those involving local building permits.

Location of EIS Background Data

Background information and all documents incorporated by reference in this Final EIS are available for review at the project website at www.kingcounty.gov/northeast.

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LIST OF ABBREVIATIONS AND ACRONYMS

AADT	annual average daily traffic
ANSI	American National Standards Institute
APD	Agricultural Production District
ARAR	applicable or relevant and appropriate requirements
BASS	Broad Area Site Screening
bgs	below ground surface
BMP	best management practice
BNSF	Burlington Northern-Santa Fe Railroad
CAA	Clean Air Act
CAO	critical areas ordinances
CARA	critical aquifer recharge area
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CHRLF	Cedar Hills Regional Landfill
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalents
COI	contaminant of interest
County	King County, Washington
Core Cities	Kirkland, Redmond, Sammamish, and Woodinville
CSWGP	Construction Stormwater General Permit
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DO	dissolved oxygen
DOH	Washington Department of Health
DNRP	Department of Natural Resources and Parks
Draft EIS	Draft Environmental Impact Statement
Ecology	Washington State Department of Ecology
EDNA	Environmental Designation for Noise Abatement
EHMT	Eastside Hazardous Materials Response Team
EIS	environmental impact statement
EPA	US Environmental Protection Agency
ESC	Erosion and Sediment Control
°F	degrees Fahrenheit
FC	fecal coliform

FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
Final EIS	Final Environmental Impact Statement
FTA	Federal Transit Administration
FWHCA	fish and wildlife habitat conservation areas
GHG	greenhouse gas
GMA	Washington State Growth Management Act
gpd	gallons per day
gpm	gallons per minute
GWP	Global Warming Potential
GWQC	groundwater quality criteria
GWR	Groundwater Rule
HAPs	hazardous air pollutants
HBMS	Hazardous Building Material Survey
HDPE	high-density polyethylene
HHW	household hazardous waste
HPA	Hydraulic Project Approval
IC	internal combustion
ILA	interlocal agreement
ISGP	Industrial Stormwater General Permit
ISO	International Organization for Standardization
KCC	Metropolitan King County Council
KCWTD	King County Department of Natural Resources and Parks, Wastewater Treatment Division
KOP	Key Observation Point
KMC	Kirkland Municipal Code
L_{eq}	equivalent sound level
LED	light-emitting diode
LEED	Leadership in Energy and Environmental Design
LFG	landfill gas
L&I	Department of Labor and Industries
Lmax	maximum sound level
LOS	level of service
MGD	million gallons per day
mg/L	milligrams per liter
MRW	moderate risk waste
MSW	municipal solid waste
MTCA	Model Toxics Control Act

MW	megawatts
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NERTS	Northeast Recycling and Transfer Station
NFA	No Further Action
NHP	Natural Heritage Program
NIOSH	National Institute for Occupational Safety and Health
NO_x	nitrogen oxides
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NTU	nephelometric turbidity unit
O_3	ozone
OSHA	Occupational Safety and Health Administration
PCE	Passenger car equivalent
PHS	Priority Habitats and Species
PM_{10}	particulate matter with diameters generally 10 micrometers and smaller
$PM_{2.5}$	particulate matter with diameters generally 2.5 micrometers and smaller
ppm	parts per million
PPV	peak particle velocity (inches per second)
PSCAA	Puget Sound Clean Air Agency
PSE	Puget Sound Energy
Public Health	Public Health – Seattle & King County
PVC	polyvinyl chloride
RCRA	Resource Conservation and Recovery Act
RCW	Revised Code of Washington
Re+	King County's Re+ Program
SAG	siting advisory committee
SAP	Sampling and Analysis Plan
SARA	Superfund Amendments and Reauthorization Act
SCAP	King County Strategic Climate Action Plan
SDWA	Safe Drinking Water Act
SEPA	State Environmental Policy Act
SFZ	Seattle Fault Zone
SMA	Shoreline Management Act
SO_2	sulfur dioxide
SPCC	spill prevention, control, and countermeasures plan
SPPM	stormwater pollution prevention manual
SWD	King County Department of Natural Resources and Parks, Solid Waste Division

SWDM	Surface Water Design Manual
SWIF	Southern Whidbey Island Fault Zone
SWMMWW	Stormwater Management Manual for Western Washington
SWPPP	stormwater pollution prevention plan
TAP	toxic air pollutant
TDS	total dissolved solids
TESC	Temporary Erosion and Sediment Control Plan
TSCA	Toxic Substance Control Act
TSDF	treatment, storage, or disposal facility
USACE	U.S. Army Corp of Engineers
USC	United States Code
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VC	vinyl chloride
VOC	volatile organic compounds
WAC	Washington Administrative Code
WDFW	Washington Department of Fish & Wildlife
WDNR	Washington State Department of Natural Resources
WF&R	Woodinville Fire and Rescue
WISHA	Washington Industrial Safety and Health Act
WMC	Woodinville Municipal Code
WQI	Water Quality Index
WRIA	Water Resource Inventory Area
WSDOT	Washington State Department of Transportation
WUTC	Washington Utilities and Transportation Commission
WWD	Woodinville Water District

Summary

This section provides a summary of the issues addressed in this Final Environmental Impact Statement (EIS) as required under Washington Administrative Code (WAC) 197-11-440(4).

Background

The lead agency proposes to site, design, and build a modern transfer station in northeast King County (the County) to meet the region surrounding northeast Lake Washington's growing demand for environmentally responsible waste management services. The new station will replace the aging Houghton Recycling and Transfer Station in Kirkland, which has been in service since the mid-1960s and does not have the capacity to offer the recycling and collection services customers increasingly need and want. The new facility will also make full recycling and waste disposal services more convenient for many customers in this area who currently must drive 30 minutes or more to reach a transfer station or drop box.

Existing Solid Waste Infrastructure

King County Solid Waste Division (SWD) operates a system of eight transfer stations, two drop box facilities, one facility and one Wastemobile that accept moderate risk waste (MRW)[1] from residents and small businesses, and one regional landfill in King County, Washington. Solid waste from businesses and residences in unincorporated King County and 37 King County cities, all but Seattle and Milton, is delivered by commercial collection companies and self-haulers to the transfer stations and drop boxes, transferred into large tractor-trailers or shipping containers, and then transported to the Cedar Hills Regional Landfill in Maple Valley, Washington.

Existing Interlocal Agreements

Revised Code of Washington (RCW) 39.34 permits a local government to enter into interlocal agreements (ILAs) with other public agencies in the interest of cooperatively sharing resources for their mutual benefit. Under RCW 39.34, SWD has executed ILAs with 37 cities to provide transfer and disposal services for unincorporated King County and the 37 cities with Interlocal Agreements.

Purpose and Need

Purpose of the Project

The purpose of this project is to develop a new transfer station to replace the aging Houghton Recycling and Transfer Station. The County's 2019 Comprehensive Solid Waste Management Plan (2019 Solid Waste Comp Plan) (King County 2019), which was adopted by cities per the adoption process described in

[1] Moderate Risk Waste: relatively small quantities of hazardous waste generated by households and small businesses. Moderate risk waste includes household hazardous waste.

the interlocal agreements between King County and incorporated cities in King County (see Section 1.2.1) and approved by Ecology, identified the need for a new transfer station in the northeast Lake Washington area of King County[2]. See also the 2007 Solid Waste Transfer and Waste Management Plan.

Need for the Project

The proposed project is needed so KCSWD can meet the region's growing demand for environmentally responsible waste management services. The nearly 60-year-old Houghton Recycling and Transfer Station is one of the busiest in terms of tonnage and transactions, yet it has outlived its useful life and lacks capacity for the type of recycling and moderate risk waste (Alternative 2 only) collection services that are increasingly in demand. The new recycling and transfer station (RTS), which will be called the Northeast Recycling and Transfer Station (NERTS), is proposed to be located in the northeastern area of King County, an area illustrated in Figure 5-4 of the 2019 Comprehensive Solid Waste Management Plan (King County 2019) and in Figure 1-2 of this EIS. This document analyzes the potential beneficial and adverse environmental impacts of a new NERTS for the alternatives under consideration. This document analyzes the potential beneficial and adverse environmental impacts of a new NERTS for the alternatives under consideration.

Specific Project Objectives

SWD's objectives for the new NERTS facility include 1) optimizing opportunities for the community to recycle; 2) meeting modern service levels for capacity, convenience, and accessibility; and 3) integrating safely into the host community. These three objectives for the NERTS facility will be used as the basis for evaluating the features of the proposed project and action alternatives, along with the No Action Alternative.

Alternative Site Selection Process

SWD initiated a siting process for the new Northeast Recycling and Transfer Station in March 2020, including establishing a siting advisory group (SAG) that included 16 appointed members representing the Core Cities (Kirkland, Redmond, Sammamish, Woodinville), and six at-large members (with total

[2] This EIS refers to northeast King County or northeast area of King County as the area proposed for siting and building the Northeast Recycling and Transfer Station (NERTS) consistent with the 2019 Comprehensive Solid Waste Management Plan. The 2001 Solid Waste Comp Plan, the 2007 Solid Waste Transfer and Waste Management Plan, and the 2019 Comprehensive Solid Waste Management Plan all make a distinction between the urban and rural areas served by KCSWD facilities, with urban areas (incorporated areas and areas within the urban growth boundary) served by transfer stations and rural areas served by drop-box facilities or transfer stations to reflect services appropriate to those areas of King County with both high and low population densities, respectively. The 2007 Solid Waste Transfer and Waste Management Plan focused on modernizing the five aging urban facilities (in the incorporated areas or within the UGA, including one for the northeast Lake Washington service area (SWD 2007), and recommended that the rural facilities (drop boxes and Vashon and Enumclaw) be kept as-is or as already replaced. The 2019 Comprehensive Solid Waste Management Plan recommends that "the 1960s era Houghton station in Kirkland be replaced with a modern station so that equitable levels of service are available throughout the urban area including the fast-growing Northeast part of King County." Between the 2007 Solid Waste Transfer and Waste Management Plan and the 2019 Comprehensive Solid Waste Management Plan, terminology for the area was shortened, dropping Lake Washington, and changing to either the northeast service area, northeast area, northeast county, northeast King County, or northeast area of King County.

participants varying over time). The siting process was comprised of six main steps. The first three steps identified and screened potential sites within the study area using site selection criteria specifically developed for this project. In Step 4 the sites that best met the screening criteria were assessed on a comparative basis, and in Step 5 the most desirable sites were identified for further investigation, which is the current SEPA environmental review process. Step 6 will be the actual selection of a site. Additional detail about the steps described above and shown below can be found at the KCSWD website (www.kingcounty.gov/northeast).

Environmental Review Process

Overview

The State Environmental Policy Act (SEPA) is intended to ensure that environmental values are considered during decision-making by state and local agencies. SEPA mandates a process to identify and analyze alternatives, potential environmental impacts, and mitigation measures associated with governmental decisions.

For any proposal involving a decision on a specific project, the state SEPA Rules require that a threshold determination be made to determine whether implementation of the project has the potential to result in significant adverse impacts on the environment (WAC 197-11-310(1)). For the current proposal to build a new NERTS facility, KCSWD has determined that one or more of the alternatives under this proposal has the potential to result in significant adverse impacts on the environment. A SEPA EIS is therefore required (WAC 197-11-330(4)). The purpose of an environmental impact statement (EIS) is to “ensure that SEPA’s policies are an integral part of the ongoing programs and actions of state and local government” (WAC 197-11-400(1)).

This Final EIS identifies potential significant impacts; describes mitigation measures that can be used (and in many cases, are currently used) to avoid such impacts or reduce them below significant levels; and summarizes any significant unavoidable adverse impacts--that is, significant impacts that cannot or will not be mitigated. Beneficial impacts are also discussed where relevant to the choice among alternatives.

Public Involvement Prior to the EIS Process

Beginning in the summer of 2020 and well before the EIS process began, information about the project was distributed widely among several groups, including the Core Cities and unincorporated King County, the SAG, neighborhood and community stakeholders, property owners, the public, and the media.

SWD’s outreach prior to the EIS process used a variety of media and other public information tools, including SAG meetings, postcard direct mailings, tabling at local events, press releases, newsletters and publications, briefings, email updates to subscribers through GovDelivery, notices on the project website and SWD’s social media platforms. See the project website for more details: www.kingcounty.gov/northeast.

SEPA Scoping

Scoping is required to "identify reasonable alternatives and probable significant adverse environmental impacts" and to "eliminate from detailed study those impacts that are not significant (WAC 197-11-408 (2)(b))." KCSWD held two EIS scoping periods. The first was a 75-day comment period from November 3, 2022, through January 17, 2023; the second was a 30-day comment period from March 20, 2023, through April 10, 2023.

During the scoping periods, KCSWD invited agencies, affected tribes, members of the public, and stakeholders to comment on the scope of the EIS relating to the following:

- Potentially affected resources and the extent of study and analysis needed to understand each probable impact
- Probable significant adverse impacts
- Required permits or other approvals
- Measures to avoid, minimize, and mitigate (offset) effects of the proposal
- A reasonable range of alternatives, including alternative sites

SWD provided several ways to provide input to the EIS scope, including an online open house, a written comment process, and public scoping meetings.

Issuance of Draft EIS and Draft EIS Comment Period

A comment period of 62 days (WAC 197-11-502(5)(b)) began with the issuance of the Draft EIS on February 7, 2024. There were two in-person public hearings and one virtual public hearing, and a public online open house during the entire comment period, to receive comments. Comments were due no later than April 9, 2024, and were submitted in the following ways:

- Verbal comments in testimony to the court reporter at all of the public hearings
- Written comments on comment cards at in-person public hearings
- Via the online comment form at the online open house: www.kingcounty.gov/northeast
- Via email to the project email: northeast@kingcounty.gov
- Letters sent to King County Solid Waste Division

Issuance of Final EIS

This Final EIS has been prepared to include modifications to the text of the EIS stemming from the comments received on the Draft EIS. This Final EIS includes comments received on the Draft EIS and responses to comments, in Appendix L.

Description of Alternatives

This Final EIS evaluates action alternatives for two sites (Alternatives 1 and 2, Figure S-1) in addition to the No Action Alternative for the NERTS, as follows:

- No Action Alternative – A new recycling and transfer station would not be sited in northeastern King County. The existing Houghton Recycling and Transfer Station (RTS) at 11724 NE 60th Street in Kirkland would continue to be operated (Figure S-2).
- Alternative 1: The existing Houghton Recycling and Transfer Station property at 11724 NE 60th Street in Kirkland. This site action alternative has two options:
  - 1A – A facility constructed after the existing transfer station building is closed and deconstructed or demolished (Figure S-3)
  - 1B – A facility constructed while the existing transfer station building is open and operating, and then the existing transfer station building would be closed and repurposed, or deconstructed or demolished and replaced after the new station is open (Figure S-4)
- Alternative 2: A site comprised of six tax parcels in the 15000 block of Woodinville-Redmond Road NE in Woodinville (Figure S-5)

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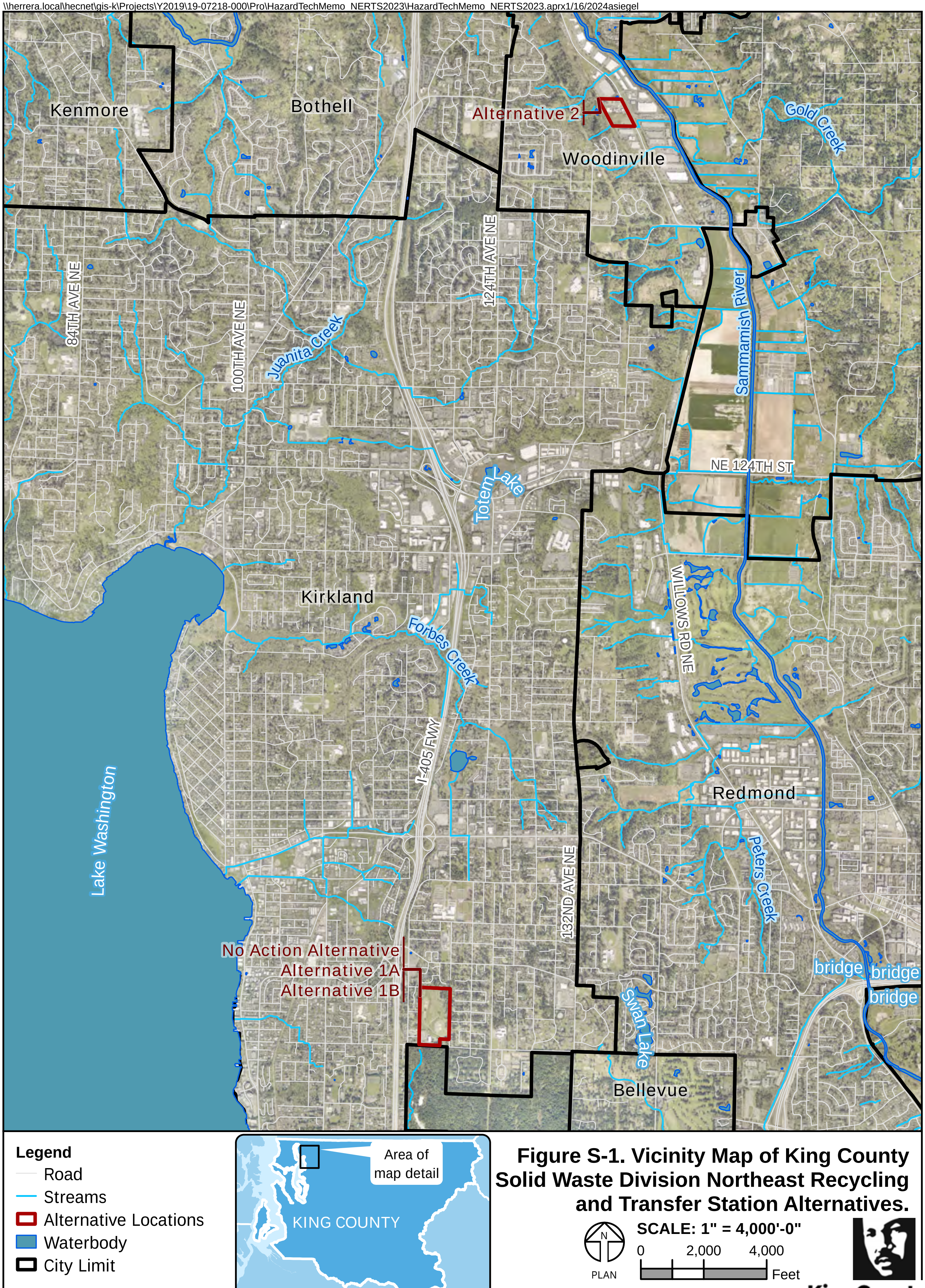

Figure S-1. Vicinity Map of King County Solid Waste Division Northeast Recycling and Transfer Station Alternatives.

SCALE: 1"=120'-0"

0' 60' 120' 240' 480'

PLAN

LEGEND

SITE BOUNDARY

AREA BOUNDARY

Figure S-2
No Action Alternative

King County Solid Waste Division
Northeast Recycling and Transfer Station

King County

SCALE: 1"=120'-0"

0' 60' 120' 240' 480'

PLAN

LEGEND

- ALTERNATIVE LOCATION
- POTENTIAL SITE DEVELOPMENT AREA
- FUTURE DEVELOPMENT AREAS
- EXAMPLE ENTRANCE / EXIT

Figure S-3
Action Alternative 1A

King County Solid Waste Division
Northeast Recycling and Transfer Station

King County

SCALE: 1"=120'-0"

0' 60' 120' 240' 480'

PLAN

LEGEND

- ALTERNATIVE LOCATION
- POTENTIAL SITE DEVELOPMENT AREA
- FUTURE DEVELOPMENT AREAS
- EXISTING BUILDINGS TO REMAIN DURING CONSTRUCTION
- EXAMPLE ENTRANCE / EXIT

Figure S-4
Action Alternative 1B

King County Solid Waste Division
Northeast Recycling and Transfer Station

King County

SCALE: 1"=120'-0"

0' 60' 120' 240' 480'

N

LEGEND

- ALTERNATIVE BOUNDARY
- POTENTIAL SITE DEVELOPMENT AREA
- FUTURE DEVELOPMENT AREAS
- 79.8' WETLAND BUFFER
- 10'-0" BUILDING SETBACK
- EXISTING WETLAND AREA
- EXAMPLE ENTRANCE / EXIT

Figure S-5
Alternative 2

King County Solid Waste Division
Northeast Recycling and Transfer Station

King County

Summary of Potential Impacts

Potential environmental impacts were evaluated for the development of each of the two action alternatives as well as the No Action Alternative (Table S-3). Where appropriate for an environmental element, mitigation measures were identified which could be implemented to address adverse impacts.

For each of the alternatives in Table S-3, the overall significance of impacts is summarized for each element of the environment according to the following key:

Significance of Impact	
No adverse impacts identified	
Less-than-significant adverse impact	
Potentially significant adverse impact that may be mitigated to less-than-significant	
Significant adverse impact	

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.

No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
Section 3.1 Earth			
Significance of Impact:	Significance of Impact:	Significance of Impact:	Significance of Impact:
Construction • No Impacts • No Mitigation Required *Operation* • There would be no additional impacts on earth. • No Mitigation Required	*Construction* • Steep slope hazards may be associated with the development of Alternative 1A and each action alternative. • Soil movement, such as surface excavation, filling, and/or grading may occur at Alternative 1A and at each action alternative. Ground disturbance may temporarily increase the risk of erosion. • Dewatering may be required for excavation at Alternative 1A and at each action alternative, which may lower the groundwater table and temporarily reduce susceptibility to liquefaction in the study area during a potential seismic event. • Development at Action Alternative 1A and 1B would include excavating and removing waste to create more stable building foundations and installation of new or modified environmental control systems, creating a reduction in cumulative impacts from past actions at the site. • A geotechnical study would be conducted for Alternative 1A to identify appropriate design measures to address steep slope hazards.	*Construction* • Steep slope hazards may be associated with the development of Alternative 1B and each action alternative. • Soil movement, such as surface excavation, filling, and/or grading may occur at Alternative 1B and at each action alternative. Ground disturbance may temporarily increase the risk of erosion. • Dewatering may be required for excavation at Alternative 1B and at each action alternative, which may lower the groundwater table and temporarily reduce susceptibility to liquefaction in the study area during a potential seismic event. • Development at Action Alternative 1A and 1B would include excavating and removing waste to create more stable building foundations and installation of new or modified environmental control systems, creating a reduction in cumulative impacts from past actions at the site. • A geotechnical study would be conducted for Alternative 1B to identify appropriate design measures to address steep slope hazards.	*Construction* • Steep slope hazards may be associated with the development of Alternative 2 and each action alternative. The west of the site for Action Alternative 2 is indicated as a significant erosion hazard. • Soil movement, such as surface excavation, filling, and/or grading may occur at Alternative 2 and at each action alternative. Ground disturbance may temporarily increase the risk of erosion. • The northwest portion of the site for Alternative 2 is designated with moderate to severe potential for shallow debris slides to start. • The southwest portion of the Alternative 2 site and the area adjacent to the western boundary is designated as potentially susceptible to landslide hazards. • The location for Action Alternative 2 is designated with low to moderate liquefaction susceptibility. However, the high seismicity of the region combined with the young alluvial deposits mapped at the site with potentially high groundwater table could result in high liquefaction potential at the site.

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.			
No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
	• Erosion and sedimentation during construction and operation would be controlled by the implementation of a SWPPP to comply with the requirements of the NPDES Construction Stormwater General Permit and a TESC plan. Disturbance to existing vegetation would be minimized where possible and revegetation would occur as soon as construction related activities ended. • No mitigation is required for dewatering during construction at Alternative 1A or other action alternative sites. *Operation* • The operation of the new NERTS facility associated with Action Alternative 1A and each action alternative would not change or impact the earth landscape nor alter potential geologic hazards. • The new NERTS facility at Action Alternative 1A and each action alternative would have the beneficial, indirect impact of providing source-separated yard waste collection. • New site buildings and associated infrastructure at Alternative 1A and each action alternative would have the beneficial impact adding to the stock of building built to modern building codes to withstand seismic events. • No Mitigation Required.	• Erosion and sedimentation during construction and operation would be controlled by the implementation of a SWPPP to comply with the requirements of the NPDES Construction Stormwater General Permit and a TESC plan. Disturbance to existing vegetation would be minimized where possible and revegetation would occur as soon as construction related activities ended. • No mitigation is required for dewatering during construction at Alternative 1B or other action alternative sites. *Operation* • The operation of the new NERTS facility associated with Action Alternative 1B and each action alternative would not change or impact the earth landscape nor alter potential geologic hazards. • The new NERTS facility at Action Alternative 1B and each action alternative would have the beneficial, indirect impact of providing source-separated yard waste collection. • New site buildings and associated infrastructure at Alternative 1B and each action alternative would have the beneficial impact adding to the stock of building built to modern building codes to withstand seismic events. • No Mitigation Required.	• Dewatering may be required for excavation at Alternative 2 and at each action alternative, which may lower the groundwater table and temporarily reduce susceptibility to liquefaction in the study area during a potential seismic event. • A geotechnical study would be conducted for Alternative 2 to identify appropriate design measures to address steep slope, erosion, debris slide, landslide, and seismic hazards. Structural BMPs may include retaining walls, site grading and/or regrading, and any special foundation or construction techniques. Based on Site Class D/E conditions and the regional seismicity DNR predicts the Seismic Design Category of D1 at the site which indicates heavy seismic detailing might be required for the structure. • Erosion and sedimentation during construction and operation would be controlled by the implementation of a SWPPP to comply with the requirements of the NPDES Construction Stormwater General Permit and a TESC plan. Disturbance to existing vegetation would be minimized where possible and revegetation would occur as soon as construction related activities ended.

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.			
No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
			• No mitigation is required for dewatering during construction at Alternative 2 or other action alternative sites. *Operation* • The operation of the new NERTS facility associated with Action Alternative 2 and each action alternative would not change or impact the earth landscape nor alter potential geologic hazards. • The new NERTS facility at Action Alternative 2 and each action alternative would have the beneficial, indirect impact of providing source-separated yard waste collection. • New site buildings and associated infrastructure at Alternative 2 and each action alternative would have the beneficial impact adding to the stock of building built to modern building codes to withstand seismic events. • The steep slopes in the western portion of the study area at Alternative 2 are susceptible to landslides from erosion and earthquakes have the potential to create short-term, localized, and regional impacts if operations are impacted.

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.

No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
Section 3.2 Air			
Significance of Impact:	Significance of Impact:	Significance of Impact:	Significance of Impact:
Construction • No Impacts • No Mitigation Required *Operation* • Air impacts would remain as is because the facility would remain unenclosed. • No Mitigation Required	*Construction* • Alternative 1A would result in short-term impacts on air quality during the construction phase, including generation of criteria pollutants, air toxics, GHG, fugitive dust, and odors during excavation activities and truck travel. • Construction of the project would comply with federal, state, and regional regulations related to air quality. Potential impacts on air quality would be minimized or avoided through project planning, design, and the application of identified mitigation measures and required BMPs. *Operation* • Long-term impacts should be significantly lower than those under the No Action Alternative. The development footprint over the known extent of waste in the closed Houghton landfill is smaller and could require less excavation and transportation of waste to CHRLF resulting in fewer vehicle emissions. Use of a compactor during operation at this facility would reduce hauling trips over time which would reduce impacts	*Construction* • Alternative 1B would result in short-term impacts on air quality during the construction phase, including generation of criteria pollutants, air toxics, GHG, fugitive dust and odors during excavation activities and truck travel. • The larger footprint of this alternative may require a longer construction phase and could slightly increase the duration and quantity of impacts on air quality. • Construction of the project would comply with federal, state, and regional regulations related to air quality. Potential impacts on air quality would be minimized or avoided through project planning, design, and the application of identified mitigation measures and required BMPs. *Operation* • Long-term impacts should be significantly lower than those under the No Action Alternative. The development footprint over the known extent of waste in the closed Houghton landfill is larger and could require more excavation and transportation of waste to CHRLF resulting in more vehicle emissions. Use	*Construction* • Alternative 2 would result in short-term impacts on air quality during the construction phase, including generation of criteria pollutants, air toxics, GHG, and fugitive dust during excavation activities and truck travel. • Deconstruction or demolition of a greater number of structures located on the site would result in slightly higher GHG and dust emissions. • Construction of the project would comply with federal, state, and regional regulations related to air quality. Potential impacts on air quality would be minimized or avoided through project planning, design, and the application of identified mitigation measures and required BMPs. *Operation* • Use of a compactor during operation at this facility would reduce hauling trips over time which would reduce impacts on air quality; however, increased energy usage would increase GHG emissions over the 50-year lifespan of the project. • Recycling and composting of yard waste at this facility would have the

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.			
No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
	on air quality. Enclosure of this facility would minimize fugitive dust and odors. • Recycling and composting of yard waste at this facility would have the beneficial impact of reducing methane emissions. • For all CAPs and MSATs, Action Alternative 1A produces lower emissions than the No Action Alternative in 2029 and also in 2040. • Operation of the project would comply with federal, state, and regional regulations related to air quality. Potential impacts on air quality would be minimized or avoided through project planning, design, and the application of required BMPs. • While transportation GHG emissions are lower for Action Alternative 1A in 2029 and 2040 than the No Action Alternative, they are offset by energy use by the new facility and result in total operational GHG emissions higher for Alternative 1A than the No Action Alternative in both 2029 and 2040. • No Mitigation Required	of a compactor during operation at this facility would reduce hauling trips over time which would reduce impacts on air quality. Enclosure of this facility would minimize fugitive dust and odors. • Recycling and composting of yard waste at this facility would have the beneficial impact of reducing methane emissions. • A larger buffer area between the facility and its neighbors than in Alternative 1A could result in fewer odors and less fugitive dust reaching neighbors. • For all CAPs and MSATs, Action Alternative 1B produces lower emissions than the No Action Alternative in 2029 and also in 2040. Total emissions would also be reduced by the action alternatives. • Operation of the project would comply with federal, state, and regional regulations related to air quality. Potential impacts on air quality would be minimized or avoided through project planning, design, and the application of required BMPs. • GHG emissions are similar to Alternative 1A. • No Mitigation Required	beneficial impact of reducing methane emissions. • Overall emissions of CAPs and MSATs would be lower at Alternative 2 in 2029 and 2040 than the No Action Alternative, though some vehicle emissions would be a new source in the Alternative 2 study area. • Operation of the project would comply with federal, state, and regional regulations related to air quality. Potential impacts on air quality would be minimized or avoided through project planning, design, and the application of required BMPs. • Similar to the other two alternatives, transportation GHG emissions are lower for Action Alternative 2 in 2029 and 2040 than the No Action Alternative, but they are offset by energy use by the new facility and result in total operational GHG emissions higher for Alternative 2 than the No Action Alternative in both 2029 and 2040.The No Action Alternative has lower lifespan emissions than Alternative 1, which in turn has lower lifespan emissions than Alternative 2. Per year emissions for all alternatives are well below Washington reporting requirements and are not considered significant. • No Mitigation Required

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.

No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
Section 3.3 Water			
Significance of Impact:	Significance of Impact:	Significance of Impact:	Significance of Impact:
Construction • No Impacts • No Mitigation Required *Operation* • There are ongoing challenges with surface water quality exceedances at Houghton RTS. The existing stormwater system is currently undergoing evaluation for potential improvement, which would be implemented under the No Action Alternative. However, due to aging infrastructure, it will become more difficult over time to operate and maintain the Houghton RTS under the No Action Alternative. This may result in more frequent spills and leaks. Therefore, it is expected that there would be minor direct operational impacts to water resources from continued operation of the existing Houghton RTS • Groundwater and stormwater water quality may be impacted by spills, leaks, landfill gas, and/or leachate from the existing Houghton RTS or closed Houghton landfill on the site. • An increase in traffic has the potential to increase pollution in surface water	*Construction* • Leachate from the closed Houghton landfill and groundwater, if encountered in excavations, would be managed by collection and treatment prior to disposal to the sanitary sewer. • Alternative 1A would be required to meet flow control requirements provided in the current version of the King County SWDM since the site discharges to Yarrow Creek. Therefore, stream flow and water quality conditions are not expected to be impacted during construction. • No Impacts to floodplains • Impacts would be negligible since Alternative 1A would be required to comply with the current version of the King County SWDM, City of Kirkland Addendum to the King County SWDM, and the KMC. • No Mitigation Required *Operation.* • Alternative 1A has a potential site development area of approximately 10 acres, approximately 70 percent of which would be impervious. These impervious surfaces would result in	*Construction* • Leachate from the closed Houghton landfill and groundwater, if encountered in excavations, would be managed by collection and treatment prior to disposal to the sanitary sewer. • Alternative 1B would be required to meet flow control requirements provided in the current version of the King County SWDM since the site discharges to Yarrow Creek. Therefore, stream flow and water quality conditions are not expected to be impacted during construction. • No Impacts to floodplains • Impacts would be negligible to stormwater and water quality since Alternative 1B would be required to comply with the current version of the King County SWDM, City of Kirkland Addendum to the King County SWDM, and the KMC. • No Mitigation Required *Operation* • Alternative 1B has a potential site development area of approximately 12.8 acres, approximately 70 percent of which would be impervious. These	*Construction* • One site to the south of the Alternative 2 site has had a documented potential hazardous material release, which may impact groundwater during construction based on its location upgradient with respect to the reported direction of groundwater flow. More information on the impact of hazardous materials can be found in Section 3.4. • Alternative 2 would be designed and constructed to avoid adverse wetland, stream, river, and buffer impacts to the maximum extent possible. If surface waters (i.e., wetland, wetland buffer, grass swale, tributary, and Sammamish River) are affected during construction, required mitigation measures under King County and Woodinville municipal codes would be implemented. • No Impacts to floodplains • Impacts to stormwater and water quality would be negligible since Alternative 2 would be required to comply with the current version of the King County SWDM and the WMC. • No Mitigation Required *Operation*

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.

No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
runoff, such as heavy metals and suspended solids. • No Impacts to floodplains • The No Action Alternative would be required to comply with existing and future regulations governing water resources, including a new ISGP.	reduced infiltration, an increase in surface runoff, and degradation of water quality. Design and operational source control BMPs would be used to minimize these potential operational impacts. • No Impacts to floodplains • The proposed action would have beneficial direct effects to stormwater runoff quality and quantity, as all runoff would be treated and detained to current standards and routed to discharge points with more reliable infrastructure. • No Mitigation Required	impervious surfaces would result in reduced infiltration, an increase in surface runoff, and degradation of water quality. Design and operational source control BMPs would be used to minimize these potential operational impacts. • No Impacts to floodplains • The proposed action would have beneficial direct effects to stormwater runoff quality and quantity, as all runoff would be treated and detained to current standards and routed to discharge points with more reliable infrastructure. • No Mitigation Required	• Alternative 2 has a potential site development area of at least seven acres with additional area potentially available dependent on compliance with federal, state, and local environmental regulations, of which about 70 percent of would be impervious. These impervious surfaces would result in reduced infiltration, an increase in surface runoff, and degradation of water quality. It is expected that the increased surface water and water quality impacts to the wetland, wetland buffer, grass swale, tributary, and Sammamish River would be minimal due to the use of design and operational source control BMPs. • No Impacts to floodplains • The proposed action would have beneficial direct effects to stormwater runoff quality and quantity, as all runoff would be treated and detained to current standards and routed to discharge points with more reliable infrastructure. • No Mitigation Required

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.			
No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
Section 3.4 Hazardous Materials			
Significance of Impact:	Significance of Impact:	Significance of Impact:	Significance of Impact:
Construction • No Impacts • No Mitigation Required *Operation* • Impacts related to hazardous materials would continue to be minimized as KCSWD conducts activities at the Houghton RTS and the closed Houghton landfill to effectively carry out waste disposal needs, meet permit requirements, and maintain environmental control systems. • No Mitigation Required	*Construction* • Alternative 1A would result in impacts related to hazardous materials such as temporary removal of the vegetated cover system, disturbance of refuse and associated contaminated soils, and managing landfill gas, leachate, groundwater, and odors. A benefit of Action Alternative 1A would include excavating and removing refuse for off-site disposal and improving the environmental control systems for the closed landfill in the areas adjacent to the redevelopment. • King County's construction contractor would be contractually obligated to comply with all regulations, permits, plans, and authorizations issued and prepared for the project. Best management plans would mitigate and prevent the release or spread of dust or contaminated media and prevent or minimize impacts on environmental health.	*Construction* • Impacts would be similar to Alternative 1A, but potentially more refuse would require excavation, and it could result in temporary additional risk of exposure to hazardous materials. • Mitigation measures would be the same as Alternative 1A. *Operation* • Impacts would be similar to Alternative 1A. • Mitigation measures would be the same as Alternative 1A.	*Construction* • Alternative 2 could result in generation of construction, remediation, and demolition related wastes, and temporary impacts from contractor use of hazardous materials, or from encountering existing soil or groundwater contamination. Contamination that otherwise would have remained in place would be discovered and addressed by the proposed project. • Mitigation measures would be similar to Alternatives 1A and 1B except that no upgrades to environmental control systems would be needed because the site is not a closed landfill. *Operation* • Impacts would be similar to Alternatives 1A and 1B.

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.

No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
	Operation • Impacts could result from the use of hazardous materials during future ongoing operation and maintenance activities. Leaks or spills could occur on site during operation. Odors are expected to be periodically evident to workers and visitors inside the new transfer station. • A Plan of Operations would describe the waste acceptance and handling policy, facility maintenance and public safety measures, record keeping and reporting, work safety and training, and backup operations in the case of power failure or a natural disaster. • Measures typically undertaken to prevent leaks or spills during on site operation include staff training in proper material handling, labeling, and storage; signage for transfer station users and education of site visitors by transfer station operators; use of secondary containment pallets for drums storing liquids; and daily site inspections.		• An MRW facility would operate at the site to accept wastes from households and small businesses, with the waste temporarily stored in specialized containers on site. The facility would follow Ecology's Moderate Risk Waste Fixed Facility Guidelines, and its Operating Plan would describe safety considerations; the waste acceptance policy; unloading procedures; sorting, storage, and packaging protocols; storage cabinet procedures; maximum quantities allowed to be stored onsite; drum handling and shipment procedures; and spill prevention and response procedures. The MRW facility would likely reduce the risk of illegal dumping in the surrounding community and resulting potential environmental contamination, including in the Sammamish Valley and Agricultural Production District (APD). • Mitigation measures would be the same as Alternatives 1A and 1B.
Section 3.5 Wetlands			
Significance of Impact:	Significance of Impact:	Significance of Impact:	Significance of Impact:
Construction • No Impacts • No Mitigation Required	*Construction* • No Impacts • No Mitigation Required.	*Construction* • No Impacts • No Mitigation Required	*Construction* • The existing wetland boundary would be delineated and clearly marked prior to construction so that it may be avoided to

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.			
No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
Operation • No Impacts • No Mitigation Required	*Operation* • The increase in impervious surface has the potential to impact wetlands and streams down-basin from project activities, but impacts to fish, wildlife, and associated habitat are expected to be negligible. • There is a wetland adjacent to the Alternative 1 site. While BMPs, including the new stormwater management system, are expected to minimize risk to fish and wildlife habitat, there is potential for minor impacts to vegetation, fish, and wildlife from contaminated stormwater runoff during operation of the facility. • No Mitigation Required.	*Operation* • The increase in impervious surface has the potential to impact wetlands and streams down-basin from project activities, but impacts to fish, wildlife, and associated habitat are expected to be negligible. • There is a wetland adjacent to the Alternative 1 site. While BMPs, including the new stormwater management system, are expected to minimize risk to fish and wildlife habitat, there is potential for minor impacts to vegetation, fish, and wildlife from contaminated stormwater runoff during operation of the facility. • No Mitigation Required	the greatest extent possible during construction. • The project design would follow mitigation sequencing requirements to avoid and minimize impacts to wetlands to the greatest extent possible. If impacts are unavoidable, the appropriate mitigation measures would be taken to compensate for any impacts to wetlands, resulting in no significant impacts to wetlands. *Operation* • There is a wetland on the Alternative 2 site and a stream directly adjacent to the site. While BMPs, including the new stormwater management system, are expected to minimize risk to fish and wildlife habitat, there is potential for minor impacts to vegetation, fish, and wildlife from contaminated stormwater runoff during operation of the facility. • No Mitigation Required
Section 3.6 Vegetation, Fish, and Wildlife			
Significance of Impact:	Significance of Impact:	Significance of Impact:	Significance of Impact:
Construction • No Impacts • No Mitigation Required *Operation*	*Construction* • Short-term construction activities that produce noise could cause temporary disturbance and/or dispersal of wildlife	*Construction* • Short-term construction activities that produce noise could cause temporary disturbance and/or dispersal of wildlife	*Construction* • Short-term construction activities that produce noise could cause temporary disturbance and/or dispersal of wildlife

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.

No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
• Impacts negligible because ongoing operations would not alter existing habitat conditions on or adjacent to the site. • Vector wildlife would continue to be present but would be controlled by BMPs and operational procedures in place. • No Mitigation Required	away from the site, but impacts are expected to be negligible. • Increased risk for erosion and runoff and temporary effects to water quality during construction clearing and grading and development of the site, but with BMPs in place, impacts are expected to be negligible. • Potential for leaks and spills from heavy equipment that could affect wildlife, but a Spill Prevention Control and Countermeasures plan would minimize these risks. • Clearing of some amount of upland vegetation and the loss of associated wildlife habitat, but impacts are expected to be negligible. Impacts to habitat under Alternative 1A would be slightly less than those under Alternative 1B due to the smaller development footprint of Alternative 1A. Habitat impacts under Alternative 1A or 1B would be less than those under Alternative 2 because the mowed grasses and Himalayan blackberry that would be cleared at the Alternative 1 site likely provide less value to wildlife than the vegetation at the Alternative 2 site. • Export of material with non-regulated or regulated noxious weeds. • Loss of wildlife habitat could have indirect impacts on processes dependent on wildlife, such as the role of pollinators in agriculture. These impacts are unlikely to	away from the site, but impacts are expected to be negligible. • Increased risk for erosion and runoff and temporary effects to water quality during construction clearing and grading and development of the site, but with BMPs in place, impacts are expected to be negligible. • Potential for leaks and spills from heavy equipment that could affect wildlife, but a Spill Prevention Control and Countermeasures plan would minimize these risks. • Clearing of some amount of upland vegetation and the loss of associated wildlife habitat, but impacts are expected to be negligible. Impacts to habitat under Alternative 1B would be slightly greater than those under Alternative 1A due to the larger development footprint of Alternative 1B. Habitat impacts under Alternative 1A or 1B would be less than those under Alternative 2 because the mowed grasses and Himalayan blackberry that would be cleared at the Alternative 1 site likely provide less value to wildlife than the vegetation at the Alternative 2 site. • Export of material with non-regulated or regulated noxious weeds. • Loss of wildlife habitat could have indirect impacts on processes dependent on wildlife, such as the role of pollinators in agriculture. These impacts are unlikely to	away from the site, but impacts are expected to be negligible. • Increased risk for erosion and runoff and temporary effects to water quality during construction clearing and grading and development of the site; while BMPs are expected to minimize risk to fish and wildlife habitat, there is potential for minor impacts to vegetation, fish, and wildlife. • Potential for leaks and spills from heavy equipment that could affect wildlife, but a Spill Prevention Control and Countermeasures plan would minimize these risks. • Clearing of some amount of upland vegetation and the loss of associated wildlife habitat, but impacts are expected to be negligible; potential that a portion of the vegetated wetland buffer may not be avoided during construction, but impacts would be minimized through BMPs, such as demarcated clearing limits. Habitat impacts under Alternative 2 would be greater than those under Alternative 1A or 1B due to the potential for impacts to wetland and buffer vegetation under Alternative 2. • Export of material with non-regulated or regulated noxious weeds. • Loss of wildlife habitat could have indirect impacts on processes dependent on wildlife, such as the role of pollinators in agriculture. These impacts are unlikely to

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.

No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
	be significant and would be offset with additional native plantings supportive of pollinator species. • A qualified wildlife biologist would survey the site prior to vegetation clearing to determine the presence of protected habitat and species. • Planting plans for landscaped areas and post-construction revegetation would include native plants that may benefit wildlife, chosen in consultation with Tribes and consistent with City of Kirkland and King County code. *Operation* • Impacts from operational noise, light, and glare are anticipated to be negligible. • Building height could impede migration and regular movement of birds, but this impact would be minor because the square footage of the building would be small in comparison to the area used by birds at either location, and light and glare would be mitigated by directing nighttime lighting downward. • Air toxics from vehicle emissions may affect local air toxics concentrations but would not be large enough or widely dispersed enough to affect regional air quality or the health of nearby wildlife. • The increase in impervious surface has the potential to impact wetlands and streams down-basin from project activities, but impacts are expected to be negligible.	be significant and would be offset with additional native plantings supportive of pollinator species. • A qualified wildlife biologist would survey the site prior to vegetation clearing to determine the presence of protected habitat and species. • Planting plans for landscaped areas and post-construction revegetation would include native plants that may benefit wildlife, chosen in consultation with Tribes and consistent with City of Kirkland and King County code. *Operation* • Impacts from operational noise, light, and glare are anticipated to be negligible. • Building height could impede migration and regular movement of birds, but this impact would be minor because the square footage of the building would be small in comparison to the area used by birds at either location, and light and glare would be mitigated by directing nighttime lighting downward. • Air toxics from vehicle emissions may affect local air toxics concentrations but would not be large enough or widely dispersed enough to affect regional air quality or the health of nearby wildlife. • The increase in impervious surface has the potential to impact wetlands and streams down-basin from project activities, but impacts are expected to be negligible.	be significant and would be offset with additional native plantings supportive of pollinator species. • A qualified wildlife biologist would survey the site prior to vegetation clearing to determine the presence of protected habitat and species. • A qualified fisheries biologist would perform an on-site assessment of streams and adjacent ditches for potential salmonid presence or viable habitat prior to construction. • Culverts would be designed to meet fish passage criteria. • Impacts to wetlands would be minimized to maintain a greater diversity of wildlife and wildlife habitat. This measure would be implemented during the engineering site design and project permitting process. • Revegetation would be completed in wetland and stream areas, where practicable, to enhance stream and wetland habitat to benefit wildlife and fish. • Planting plans for landscaped areas and post-construction revegetation would include native plants that may benefit wildlife, chosen in consultation with Tribes and consistent with City of Woodinville and King County code. *Operation* • Impacts from operational noise, light, and glare are anticipated to be negligible.

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.

No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
	• Vector wildlife control poses a risk to raptors and other predatory wildlife that could potentially consume animals containing pesticide residues. The enclosed transfer building, concrete tipping floor, concrete walls, and use of BMPs (such as increased cleaning frequency or adding raptor nest boxes to increase predation of pests) would reduce this risk to less than significant. • No Mitigation Required.	• Vector wildlife control poses a risk to raptors and other predatory wildlife that could potentially consume animals containing pesticide residues. The enclosed transfer building, concrete tipping floor, concrete walls, and use of BMPs (such as increased cleaning frequency or adding raptor nest boxes to increase predation of pests) would reduce this risk to less than significant. • No Mitigation Required	• Building height could impede migration and regular movement of birds, but this impact would be minor because the square footage of the building would be small in comparison to the area used by birds at either location, and light and glare would be mitigated by directing nighttime lighting downward. • Air toxics from vehicle emissions may affect local air toxics concentrations but would not be large enough or widely dispersed enough to affect regional air quality or the health of nearby wildlife. • Potential for minor impacts from contaminated stormwater runoff during operation because there is a wetland on the site and a stream directly adjacent to the site. Addition of impervious surface could increase the temperature of runoff. BMPs are expected to reduce these impacts to less than significant. • Vector wildlife control poses a risk to raptors and other predatory wildlife that could potentially consume animals containing pesticide residues. The enclosed transfer building, concrete tipping floor, concrete walls, and use of BMPs (such as increased cleaning frequency or adding raptor nest boxes to increase predation of pests) would reduce this risk to less than significant.

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.			
No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
			• Wetlands, streams, and associated habitat would be clearly marked and avoided during operation to minimize impacts.
Section 3.7 Energy and Natural Resources			
Significance of Impact: ●	Significance of Impact: ●	Significance of Impact: ●	Significance of Impact: ●
Construction • No Impacts • No Mitigation Required *Operation* • Energy and natural resource demands will remain consistent with current use. • The No Action Alternative uses approximately 24,000 MMBtu (million British thermal units) in existing conditions, which would grow to about 34,000 MMBtus in 2029 and decline to about 26,000 MMBtus in 2040. • No Mitigation Required	*Construction* • Construction would require short-term additional use of energy and materials, but impacts would be minimal because of recycling and reuse, energy efficiency, and routing efficiency efforts. Alternative 1A requires over 140,000 MMBtu of energy use for all construction vehicles over the 30-month construction period. The majority of diesel and gasoline used for construction, approximately 930,000 gallons, are expected to be used in the first year of construction activities. • Deconstructing or demolishing the existing facility uses more energy than repurposing, • No Mitigation Required. • Energy efficiency and reuse efforts will be incorporated into construction efforts. *Operation* • Alternative 1A would use approximately 158,000 gallons of fuel in 2040, with about 58,000 gallons (about 37 percent of the	*Construction* • Construction would require short-term additional use of energy and materials, but impacts would be minimal because of recycling and reuse, energy efficiency, and routing efficiency efforts. Alternative 1B requires almost 170,000 MMBtu of energy use for all construction vehicles over the 30-month construction period. The majority of diesel and gasoline used for construction, over 1.1 million gallons, are expected to be used in the first two years of construction activities. • Under Alternative 1B, repurposing the existing facility reduces energy use greater than deconstruction or demolition • Energy efficiency and reuse efforts will be incorporated into construction efforts. *Operation* • Alternative 1B would use approximately 158,000 gallons of fuel in 2040, with about 58,000 gallons (about 37 percent of the total) for fuel to transport materials to and bring empty trailers back from CHRLF.	*Construction* • Construction would require short-term additional use of energy and materials, but impacts would be minimal because of recycling and reuse, energy efficiency, and routing efficiency efforts. Alternative 1B requires almost 159,000 MMBtu of energy use for all construction vehicles over the 30-month construction period. The majority of diesel and gasoline used for construction, over 1.0 million gallons, are expected to be used in the first two years of construction activities. • Construction of Alternative 2 would use about the same amount of energy as Alternative 1B if the option chosen for that alternative includes demolition and replacement of the existing transfer building, and more if the Alternative 1B option includes repurposing the transfer station building as a new TBD building. None of these slight differences were large enough to be quantified using the MOVES4 model.

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.			
No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
	total) for fuel to transport materials to and bring empty trailers back from CHRLF. This compares with approximately 176,000 gallons of fuel in 2040 under the No Action Alternative, with about 76,000 gallons (about 43 percent of the total) for waste and trailer transport. • Energy efficiency efforts, including future use of alternative vehicle fuel sources, would be implemented during operation to minimize impacts on energy and natural resources. • Trucks would carry greater volumes of compacted waste, resulting in fewer trips and less fuel consumption for waste transfer than the No Action Alternative. • Energy efficiency efforts will be incorporated into operation including LED light fixtures and use of solar panels. • No Mitigation Required.	This compares with approximately 176,000 gallons of fuel in 2040 under the No Action Alternative, with about 76,000 gallons (about 43 percent of the total) for waste and trailer transport. • Energy efficiency efforts, including future use of alternative vehicle fuel sources, would be implemented during operation to minimize impacts on energy and natural resources. • Trucks would carry greater volumes of compacted waste, resulting in fewer trips and less fuel consumption for waste transfer than the No Action Alternative. • Energy efficiency efforts will be incorporated into operation including LED light fixtures and use of solar panels. • No Mitigation Required.	• The additional MRW facility construction would require slightly more energy than Alternative 1. • Energy efficiency and reuse efforts will be incorporated into construction efforts. *Operation* • Alternative 2 would use approximately 168,000 gallons of fuel in 2040, with about 74,000 gallons (about 44 percent of the total) for fuel to transport materials to and bring empty trailers back from CHRLF. • Energy efficiency efforts, including future use of alternative vehicle fuel sources, would be implemented during operation to minimize impacts on energy and natural resources. • Trucks would carry greater volumes of compacted waste, resulting in fewer trips and less fuel consumption for waste transfer than the No Action Alternative. • Operation of a MRW facility would reduce energy use for MRW disposal because of introduced system-wide efficiencies. • Energy efficiency efforts will be incorporated into operation including LED light fixtures and use of solar panels. • No Mitigation Required.

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.			
No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
Section 3.8 Environmental Health			
Significance of Impact:	Significance of Impact:	Significance of Impact:	Significance of Impact:
Section 3.8 Environmental Health *Construction* • Normal operation and maintenance of the Houghton RTS that involve repair of buildings or support structures used at the facility could include unintended exposure of maintenance workers to contaminants and hazardous materials. • SWD will continue to adhere to a site-specific Health and Safety Plan that details potential hazards on the site, including from potential contamination and hazardous materials; the Emergency Response Plan for injury or exposure; required training, equipment, and responsibilities of staff; and procedures for alerting Kirkland response agencies and personnel; and identification of emergency routes to nearby hospitals. • Ongoing coordination with Kirkland Fire Department, EMS, and medical facilities *Operation* • Environmental health at the existing Houghton RTS would remain the same or worsen. • Increasing precipitation and more intense storms resulting from climate change in the future could create drainage conditions for existing on-site stormwater or sanitary	Section 3.8 Environmental Health *Construction* • Construction workers, nearby residents, and wildlife could experience less-than-significant exposures to vehicle emissions; fugitive dust; unpleasant odors; contaminants in soil, sediment, or groundwater; criteria pollutants, air contaminants, and greenhouse gases (GHG); hazardous materials if encountered during construction; and hazardous materials used during construction (such as fuels, lubricants, solvents, and paint) if a spill were to occur. • Any waste encountered would require excavation, removal, and reburial off site at the CHRLF or other permitted facility. • Dust emissions from excavation, grading, stockpiling, hauling of soils, or deconstruction or demolition could be slightly higher or similar to the emissions from Alternative 1B depending on the deconstruction or demolition of the existing transfer station and the construction of the TBD building. • Construction could produce temporary impacts on stormwater quality from runoff and erosion during construction clearing and grading and development of the site.	Section 3.8 Environmental Health *Construction* • Impacts on construction workers, nearby residents, and wildlife would be similar to Alternative 1A. • Impacts on surface and groundwater, air emissions, fugitive dust, odor, pest and disease vectors, noise, waste storage, and litter would be the same as Alternative 1A and with similar comparisons to the No Action Alternative. • If the existing transfer building is repurposed instead of deconstructed or demolished under Alternative 1B, there could be less exposure of construction workers and neighbors to fugitive dust during construction compared with Alternative 1A. If the existing transfer building is deconstructed or demolished instead of repurposed, there could be about the same exposure as with Alternative 1A. • The development footprint over the known extent of waste in the closed Houghton landfill is larger than under Alternative 1A. This could lead to marginally higher direct, short-term risks of construction workers being potentially exposed to hazardous materials and odors.	Section 3.8 Environmental Health *Construction* • Impacts would primarily be associated with general construction activities and operation of vehicles and heavy equipment; excavation, handling, and off-site disposal contaminated soils if any are discovered; and management of stormwater and dewatering water. Construction workers, nearby residents, and wildlife could experience exposures to fugitive dust; contaminants in soil, sediment, or groundwater; criteria pollutants, air contaminants, and greenhouse gases (GHG); hazardous materials if encountered during construction, and hazardous materials used during construction if a spill were to occur. • The potential for these hazards is likely less than under Alternative 1 and the No Action Alternative because current uses of the site are not known to have produced on-site contamination and because portions of the site are undeveloped. • Construction could lead to impacts on wetlands or wetlands buffers on the southern portion of the site, and to minor

<table>
<tr><th colspan="4">Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.</th></tr>
<tr><th>No Action Alternative</th><th>Action Alternative 1 – Option 1A</th><th>Action Alternative 1 – Option 1B</th><th>Action Alternative 2</th></tr>
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<td>sewer infrastructure that result in contamination entering receiving waters without proper pretreatment. This could result in human, plant, and animal exposures to contaminants.
• The No Action Alternative would result in the greatest increase in transfer truck trips of all of the alternatives, with a resulting increase in vehicle emissions, and potential exposure to air toxics by workers, visitors, and neighbors.
• Greater waste volumes in an open undersized facility could also result in an increase in odors to be periodically evident in the community surrounding the Houghton RTS.
• Greater waste volumes, particularly with limited operational space, may lead to longer waste storage time and increases in uncontrolled litter, and could result in an increase in rodent, fly, mosquito, or other disease vector problems at the site and nearby under the No Action Alternative.
• Continued operation of the existing open transfer building could allow exposure of neighbors and wildlife to occasional noise from operations.
• Continued compliance with the applicable permits, plans, and manuals, and upgrades to the management system if necessary are expected to control both exposure and toxicity and make these direct operational impacts negligible.</td>
<td>• Exposures would be minimized by implementing mitigation measures outlined in the required project Health and Safety Plan, Stormwater Pollution Prevention Plan, and other regulatory compliance activities. KCSWD would also implement appropriate BMPs that would be required in accordance with the approved project plans, construction specifications, and permits.
• SWD would implement a waste-screening protocol during waste removal to determine waste characteristics and proper disposal requirements.
• During construction, KCSWD would tarp or otherwise cover all exposed areas of the closed landfill every day to mitigate for potential odors and fugitive gas emissions, until permanent cover and environmental controls are constructed.
• In areas of disturbance at the existing closed Houghton landfill where waste remains after construction, KCSWD would be required to install a new landfill cap, leachate collection, stormwater management, and landfill gas collection and treatment systems that meet WAC 173-351-500, the most recent and rigorous standards for landfill closure and post-closure care.
• Lead paint and asbestos abatement would be conducted if needed prior to deconstruction or demolition to minimize risks to workers.</td>
<td>• Mitigation same as Alternative 1A
• Alternative 1B would also result in new landfill cap, leachate collection, stormwater management, and landfill gas collection and treatment systems that meet WAC 173-351-500 in areas of disturbance at the existing closed Houghton landfill where waste remains after construction, but over a larger area than Alternative 1A.
<u>Operation</u>
• Same as Alternative 1A.
• Under Alternative 1B, the larger site development footprint provides a larger buffer between the operations and the neighbors to the west than under Alternative 1A. This buffer allows for additional dilution of any odors or dust emissions before they reach the site property line.
• Mitigation same as Alternative 1A</td>
<td>disruption of bird and wildlife feeding, nesting, or migration.
• Exposures would be minimized by implementing mitigation measures outlined in the required project Health and Safety Plan, Stormwater Pollution Prevention Plan, other regulatory compliance activities, and appropriate BMPs that would be required in accordance with the approved project plans, construction specifications, and permits.
• Lead paint and asbestos abatement would be conducted if needed prior to deconstruction or demolition to minimize risks to workers.
• BMPs described in Section 3.3, Water and Section 3.5, Wetlands, would be implemented to protect on-site wetlands and downstream tributaries to the Sammamish River. These methods would serve to also reduce exposure to contaminants in stormwater and surface water by on-site workers and wildlife, and those working and recreating downstream of the Alternative 2 site.
<u>Operation</u>
• Reduced impacts on fugitive dust, odor, pest and disease vectors, noise, waste storage, and litter. Most or all of these outcomes would result from the combination of modern design features of the new NERTS facility, structural BMPs, regulatory requirements, and KCSWD operational practices.</td>
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Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.

No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
• King County is preparing to replace diesel-fueled solid waste transfer trucks, maintenance vehicles, and other equipment with all-electric or hybrid electric vehicles and equipment, which would eliminate these impacts. • With the five-day waste hauling operation, KCSWD anticipates that zero to approximately fourteen trailers could be stored on site under the No Action Alternative. With operational changes to include fully enclosed trailers, removal of trailers on a “first in, first out” basis by early- to mid-following week, and generally dryer waste from self-haul customers, the risks of odors are reduced. Long-term odor monitoring and response could be considered under the No Action Alternative. It is unlikely odiferous compounds would be detected at concentrations that would be sufficient to cause any adverse health effect. Disease vectors would also be reduced.	<u>*Operation*</u> • Operation would have reduced impacts on air emissions, fugitive dust, odor, pest and disease vectors, noise, waste storage, and litter compared with the No Action Alternative. This includes impacts on nearby local receptors such as residences, daycare/schools, and park users and wildlife. Most or all of these outcomes would result from the combination of modern design features of the new NERTS facility, structural BMPs, proposed mitigations, regulatory requirements, and KCSWD operational practices. • Workers, nearby residents, and wildlife could experience being exposed to fugitive dust from waste unloading and loading operations. • An increase in transfer truck trips due to expected population and disposed waste growth will result in a short-term increase in potential exposure to air toxics by workers, visitors, and neighbors. Alternative 1A could result in fewer of these emissions compared with the No Action Alternative due to the use of waste compactors. • Workers, neighbors, plants, wildlife, soil, and surface water could be exposed to hazardous materials such as fuels, lubricants, solvents, and paint used during operation of the facility if released via accidental spills to water or land.		• With the five-day waste hauling operation, KCSWD anticipates that zero to approximately seven trailers could be stored on site under the No Action Alternative. With operational changes to include fully enclosed trailers, removal of trailers on a “first in, first out” basis by early- to mid-following week, and generally dryer waste from self-haul customers, the risks of odors are reduced. Long-term odor monitoring and response could be considered under Alternative 2. It is unlikely odiferous compounds would be detected at concentrations that would be sufficient to cause any adverse health effect. • The proposed action would reduce stormwater runoff quality and quantity impacts, as all runoff would be treated and detained to current standards and routed to discharge points with new or more reliable infrastructure. These improvements would minimize impacts for on-site wetlands and tributaries to the Sammamish River downstream of the site and would be an improvement compared with stormwater system on the developed portions of the site. • Alternative 2 would produce new vehicle trips of all types in the study area due to the presence of the new facility when compared with the absence of a facility under the No Action Alternative. All employee and transfer trailer trips would

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.			
No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
	• The proposed action would reduce stormwater runoff quality and quantity impacts, as all runoff would be treated and detained to current standards and routed to discharge points with new, more reliable infrastructure. • SWD would design an enclosed transfer building, with additional features to control odor, limit propagation of noise impacts, and to reduce exposure to stored waste, including modern mechanical exhaust ventilation systems with filtration media, closable access doorways, misting systems (or equivalent technology), tightly-sealing waste containers compatible with waste compactors, separate and reserved load-out for organics, more load-out bays, and stormwater collection to sanitary sewer for waste handling and trailer areas. • SWD would operate the new NERTS facility within state and city maximum permissible noise levels. • With the five-day waste hauling operation, KCSWD anticipates that zero to approximately seven trailers could be stored on site under the No Action Alternative. With operational changes to include fully enclosed trailers, removal of trailers on a "first in, first out" basis by early- to mid-following week, and generally dryer waste from self-haul customers, the risks of odors are reduced. Long term odor monitoring and response could be considered under Alternative 1A. It is		be new to the Alternative 2 study area. Some waste transport trips already exist on the roadway network in and around the Alternative 2 study area. While local emissions contributed by the traffic associated with the new RTS would be new to the area, their marginal contributions to the existing emissions and exposure levels from background levels of traffic in the area would mean their impact on environmental health would be less than significant. • The Alternative 2 site would also have an MRW facility and could result in exposure of on-site workers, site visitors, or neighbors to small quantity hazardous waste spills or uncontrolled emissions. However, at a minimum, the Waste Handling Procedures section of the MRW facility Operating Plan would describe safety considerations; the waste acceptance policy; unloading procedures; sorting, storage, and packaging protocols; storage cabinet procedures; maximum quantities allowed to be stored onsite; drum handling and shipment procedures; and spill prevention and response procedures. This would minimize exposures. • Mitigation same as Alternative 1A and 1B.

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.

No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
	unlikely odiferous compounds would be detected at concentrations that would be sufficient to cause any adverse health effect. • An SPCC Plan will be implemented to minimize impacts to soil, surface water, and groundwater as a result of fuel spills during construction and operation. • SWD would continue to enforce the Waste Acceptance Rule (PUT 716(PR)). • New storm drainage conveyance, treatment, and flow control facilities would address the primary target constituents for treatment at the existing Houghton RTS, including turbidity, copper, and zinc, • King County emissions would be eliminated when King County replaces diesel-fueled solid waste transfer trucks, maintenance vehicles, and other equipment with all-electric or hybrid electric vehicles and equipment. • SWD would provide all residents within a quarter-mile of the selected alternative notification of major activities and has a 24-hour hotline available for residents to report concerns. KCSWD has emergency response plans to cover RTS operations.		

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.			
No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
Section 3.9 Land and Shoreline Use			
Significance of Impact:	Significance of Impact:	Significance of Impact:	Significance of Impact:
Construction • No Impacts • No Mitigation Required _Operation_ • As currently permitted, current land use would not change, and this use would remain compatible with County plans and policies, and in conflict with some City of Kirkland plans and policies. • No Mitigation Required	_Construction_ • Construction could result in minor, localized, and short-term impacts on surrounding land uses. Slight increases in noise, dust, odors, traffic, and emissions are expected for residents within 500 feet of the proposed site. • Construction would likely disrupt the southwestern portion of the Taylor Fields 1 and 2 parking area and permanently remove the existing access road to Fields 3 and 4. • Construction would alter use of the existing Houghton RTS because it would be closed and deconstructed or demolished to make way for the new NERTS facility. Customer use would shift to other RTS facilities in the King County system. • Construction could temporarily disrupt use of the loop trails and inner trail connections at the Houghton landfill site and decrease the size of the open space. The area would be re-established, enhanced, or reconfigured to existing conditions following completion of construction. To the extent that portions of the current recreation area (passive or active) are disrupted or eliminated and not re-	_Construction_ • Construction impacts are expected to be largely similar to those for Alternative 1A. • Alternative 1B has a larger potential site development footprint and would disrupt a larger area of park and recreation use on the closed Houghton landfill during construction than would Alternative 1A. This disruption could last longer than under Alternative 1A but would also be short-term and replaced with permanent access roadways. • Mitigation same as Alternative 1A _Operation_ • Similar to Alternative 1A • Land use would potentially expand farther north into the existing park area than Alternative 1A. • Operational impacts are expected to be largely similar to those for Alternative 1A. Impacts on land use, land use plans and policies, and zoning would be the same as Alternative 1A and with similar comparisons to the No Action Alternative. • Mitigation same as Alternative 1A	_Construction_ • Construction could result in minor, localized, and short-term impacts on surrounding land uses, including the Sammamish Valley APD, similar to Alternative 1. • Construction would alter uses of the existing parcels on a long-term basis because they would be closed, businesses would relocate, and structures deconstructed or demolished to make way for the new NERTS facility. • King County would acquire the six parcels needed for the project by negotiating just terms or through the legal process of eminent domain with the affected property owners. Businesses would relocate to other properties, appropriately zoned and permitted for their intended use, with assistance from King County. • Land use permits would be obtained according to applicable local land use codes, largely consistent with land use plans and policies. • Design of the facilities and construction would comply with applicable development and building codes for the host jurisdiction and permits for construction would be

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.			
No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
	established, enhanced, or reconfigured following construction, the remaining size of the open space would be less than it is currently and result in a reduction or alteration of recreation opportunities. • The NERTS facility under Alternative 1A would result in a moderate adverse effect of eliminating the opportunity to develop other park and open space uses or to develop additional recreational uses or facilities on the portion of the site occupied by the facility. • Land use permits would be obtained according to applicable local land use codes, consistent with land use plans and policies. • Design of the facilities and construction would comply with applicable development and building codes for the host jurisdiction and permits for construction would be obtained from city agencies in compliance with established processes. • King County would construct a new compressed gravel road between the Fields 1 and 2 parking area and Fields 3 and 4 to provide access during construction and following completion of construction. *Operation* • The proposed uses could potentially create land use incompatibilities related to time of day/night activity, noise levels, odors, and conflicting movements by		obtained from city agencies in compliance with established processes. • Construction of Alternative 2 would preclude the planned expansion of a local business (Matheus Lumber) and would reduce opportunities for other future industrial or tourist uses of the site or potentially in the City of Woodinville due to the reduction in available buildable industrial land. *Operation* • Land use at the site would change from vacant, commercial, and industrial/manufacturing uses to recycling and transfer station uses, an essential public facility. • The proposed uses could potentially create land use incompatibilities related to time of day/night activity, noise levels, odors, and conflicting movements by vehicles and other modes. However, like Alternative 1, several design and operational BMPs to be incorporated into the NERTS project under Alternative 2 would reduce those impacts well below those associated with the No Action alternative. • The proposed use would be compatible with commercial and industrial land uses to the north and south of the Alternative 2 site development footprint and be buffered from potential land use incompatibilities

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.			
No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
	vehicles and other modes. However, several design and operational BMPs to be incorporated into the NERTS project would reduce those impacts well below those associated with the No Action alternative. • Alternative 1A would result in a moderate adverse effect of eliminating the opportunity to develop other park and open space uses or to develop additional recreational uses or facilities on the portion of the site occupied by the facility. • Some existing recreational area could be eliminated and not restored, resulting in a smaller open area and a reduction or alteration of recreational opportunity. • Alternative 1A is not consistent with Section 8, Public Facilities, in the Bridle Trails Neighborhood Plan (Chapter XV), Policy BT 25 of the City of Kirkland Comprehensive Plan. This would result in a moderate impact. In general, Alternative 1A would not introduce a land use pattern that would foreclose future opportunities to reach goals and polices. • Use of the Alternative 1A site as a recycling and transfer station is consistent with Kirkland's Zoning Code, as the P zone allows for essential public facilities, including solid waste transfer stations, through a Process IIB approval (KZC 45.20).		through the same mechanisms as would nearby residences. • Alternative 2 comprises 31 percent of Woodinville's buildable acres and would reduce opportunities to develop other uses that could increase job capacity, limiting the potential of Woodinville meeting the employment growth target in the current City of Woodinville Comprehensive Plan. • Alternative 2 is not entirely consistent with Chapter 4.0, Economic Development Policy ED-4.3 and 5.0 Parks, Recreation, and Open Space Policy PROS-2.1 of the City of Woodinville Comprehensive Plan. This would result in a moderate impact. In general, Alternative 2 would not introduce a land use pattern that would foreclose future opportunities to reach goals and polices. • Use of the Alternative 2 site as a recycling and transfer station is categorized as "special use" in the Tourist/Industrial zone and subject to obtaining a Special Use Permit, consistent with Chapter 21.21, Use and Occupancy Regulations under the WMC. It is allowed only as an essential public facility pursuant to Chapter 21.46 WMC. • Mitigation for Alternative 2 would require the City of Woodinville to seek additional opportunities for job growth in other areas of the City through rezones, regulations, and investment in industrial zones.

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.

No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
	• Land use permits would be obtained according to applicable local land use codes, largely consistent with land use plans and policies. Design of all facilities and construction would comply with applicable development and building codes for the host jurisdiction and permits for construction would be obtained from city agencies in compliance with established processes. • The transfer station would not operate 24 hours a day and would adhere to the operating hours stipulated in County Ordinance. Chapter 3 concludes residential daytime sound is expected to be in compliance with the regulatory limit of 60 dBA during operations due to the use of an enclosed transfer station building and potential use of additional noise mitigating measures; odor would also be reduced compared with the No Action Alternative because of facility design features; and there would be negligible impact on vehicular and active transportation safety within the study area. • Mitigation for Alternative 1 would include augmentation of recreational land uses, such as improvements at Taylor Fields. Collaboration would occur between King County, City of Kirkland, and neighborhood stakeholders to identify appropriate areas for mitigation efforts.		

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.

No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
Section 3.10 Noise			
Significance of Impact:	Significance of Impact:	Significance of Impact:	Significance of Impact:
Construction • No Impacts • No Mitigation Required *Operation* • Noise impacts would remain as is because the facility would remain unenclosed. • No Mitigation Required	*Construction* • Construction is expected to take 30 months to complete. During this time, elevated noise levels, which vary over time, could be disruptive to some nearby receptors, especially nearby residences and daycare/preschool receptors. • Construction activities will be limited to allowed construction hours to minimize noise impacts during construction. • Temporary noise barriers could be erected, and equipment alarms could be changed to limit noise impacts. Administrative efforts will be applied to ensure construction noise is limited to required hours of the day. *Operation* • Project design will include enclosing the transfer station and installing or implementing other noise reduction measures to mitigate noise impacts during operation. • Based on noise modeling, noise levels would comply with regulatory limit of 60 dBA during operations, with a maximum of 55 dBA at the nearby daycare and lower levels toward both Benjamin Franklin Elementary and the Rose Hill schools.	*Construction* • Construction is expected to take 30 months to complete. During this time, elevated noise levels, which vary over time, could be disruptive to some nearby receptors, especially nearby residences and daycare/preschool receptors. • Construction activities will be limited to allowed construction hours to minimize noise impacts during construction. • Temporary noise barriers could be erected, and equipment alarms could be changed to limit noise impacts. Administrative efforts will be applied to ensure construction noise is limited to required hours of the day. *Operation* • Project design will include enclosing the transfer station and installing or implementing other noise reduction measures to mitigate noise impacts during operation. • Noise levels would be similar to Alternative A. • The compactor hydraulics will be located within an acoustically designed room or enclosure, and the transfer station will be enclosed to mitigate noise impacts.	*Construction* • Construction is expected to take 30 months to complete. During this time, elevated noise levels, which vary over time, could be disruptive to some nearby receptors. • Construction activities will be limited to allowed construction hours to minimize noise impacts during construction. • Temporary noise barriers could be erected, and equipment alarms could be changed to limit noise impacts. Administrative efforts will be applied to ensure construction noise is limited to required hours of the day. *Operation* • Alternative 2 would introduce a new source of noise to the area. • Project design will include enclosing the transfer station and installing or implementing noise reduction measures to mitigate noise impacts during operation. • The compactor hydraulics will be located within an acoustically designed room or enclosure, and the transfer station will be enclosed to mitigate noise impacts.

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.

No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
	• The compactor hydraulics will be located within an acoustically designed room or enclosure, and the transfer station will be enclosed to mitigate noise impacts. • Noise levels are expected to be minor and not significant, based on facility and traffic noise modeling.	• Noise levels are expected to be minor and not significant, based on facility and traffic noise modeling.	• Noise levels are expected to be minor and not significant, based on facility and traffic noise modeling.
Section 3.11 Aesthetics, Light, and Glare			
Significance of Impact:	Significance of Impact:	Significance of Impact:	Significance of Impact:
Construction • Much of the facility and its elements would remain obscured from view by an opaque wooden fence and row of evergreens that parallel it. The most visually evident elements of the existing transfer station as viewed from NE 60th Street would remain visible primarily from the eastern entrance and include the transfer station building. • Transfer trucks and trailers, containers, signs, streetlights, and parked vehicles would remain visible at the entrances. • Viewed from within Taylor Fields, the most visible elements would continue to be the white, chevron-shaped forms created by the transfer station's roof, the visibility of which varies based on viewpoint. • No Mitigation Required *Operation*	*Construction* • Views would include deconstruction or demolition of the existing facility and transportation of the resulting debris, followed by construction of the new facility. • Viewers would see an increased amount of construction truck traffic on NE 60th Street, particularly under Alternative 1A. • Construction impacts for travelers along NE 60th Street would be minimal because of the narrow visual opening into the site from the road. • Construction mitigation could include fencing the construction site and installing temporary art panels on the wall, such as local school student art. *Operation*	*Construction* • Same as Alternative 1A • Viewers would see an increased amount of construction truck traffic on NE 60th Street, but there would be less truck traffic under Alternative 1B than there would be under Alternative 1A. • Mitigation same as Alternative 1A *Operation* • Requirements for tree management, landscaping standards, and building setbacks will affect the final facility design and may affect visual impacts and aesthetics. • Same as Alternative 1A. • The existing facility would be repurposed or replaced after the new construction is complete. Therefore, visual impacts would be similar to those under Alternative 1A	*Construction* • The same construction activities would occur at the Alternative 2 site as under Alternative 1, but they would be more visible from Woodinville-Redmond Road NE because of the open nature of the landscape. • Views of deconstruction or demolition and removal of existing structures associated with existing commercial and industrial uses, including construction, portable toilet rental, manufacturing, and automotive businesses. • Mitigation same as Alternative 1A and 1B. *Operation* • Requirements for tree management, landscaping standards, and building setbacks will affect the final facility design

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.

No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
• Aesthetics, light, and glare impacts would remain as is because the facility would remain unenclosed. • No Mitigation Required	• Requirements for tree management, landscaping standards, and building setbacks will affect the final facility design and may affect visual impacts and aesthetics • Views from the closed Houghton landfill/Taylor fields would include the new NERTS facility, an industrial use. • Impacts from operation differ depending on observation point. • Changes would overall range from an overall neutral visual impact to an overall adverse visual impact. • Sensitive viewers include drivers, ballplayers and spectators on Taylor Fields, hikers, walkers, and runners using trails on the closed Houghton landfill, adjacent residences. • Landscaping will be incorporated into action alternative site design, which will help block some views of the site and soften its appearance. • The number of new outdoor lights and their placement would be sufficient for safety and security purposes while minimizing light pollution and would meet requirements of City of Kirkland and King County. • Retain the row of mature evergreen trees that line the north side of NE 60th Street; Retain the deciduous shrubbery along the berm on the west side of 120th Avenue	though could differ between views and aesthetics associated with a remodeled or adapted transfer building or a new potentially smaller TBD building. • Mitigation same as Alternative 1A	and may affect visual impacts and aesthetics. • Impacts from operation differ depending on observation point. • Changes would overall range from no visual impact to an overall adverse visual impact. • Views from many areas would include the new NERTS facility, an industrial use. Because most of the existing view under the No Action Alternative contains few human-made structures, the new project elements would not be compatible with the site although they would be compatible with the industrial setting overall. • Sensitive viewers include travelers on Woodinville-Redmond Road NE (including people traveling the designated scenic byway), users of the commercial and school properties on the eastern side of the road, and current and future recreational users of a proposed future segment of the Eastrail. • Landscaping will be incorporated into action alternative site design, which will help block some views of the site and soften its appearance. • The number of new outdoor lights and their placement would be sufficient for safety and security purposes while minimizing light pollution and would meet requirements of City of Woodinville and King County.

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.

No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
	NE; Retain vegetation on the west side of Taylor Fields. • The facility design will incorporate additional trees and shrubbery to shield and enhance the aesthetic qualities of the facility.		• The existing row of evergreen trees could be retained as a wetland boundary demarcation. • The facility design will incorporate additional trees and shrubbery to shield and enhance the aesthetic qualities of the facility. • Visual impacts, although adverse for some viewpoints, are considered not significant due to the transitory and speedy nature of passing motorists and recreationists.
Section 3.12 Historic and Cultural Resources			
Significance of Impact:	Significance of Impact:	Significance of Impact:	Significance of Impact:
Construction • No Impacts • No Mitigation Required *Operation* • Continued operation of the existing Houghton RTS would not pose impacts to any known or suspected cultural resources. • No changes to the historic use of the transfer station would occur. • No Mitigation Required	*Construction* • The existing Houghton transfer station building has been determined eligible as a Kirkland city landmark, and potentially eligible for listing in the NRHP. Any adaptation, remodeling, or deconstruction or demolition of the existing station or changes to the existing property as proposed will require mitigation. • Considered a “low risk” for the presence of archaeological resources according to the WISAARD predictive model for archaeological sensitivity. • Affected Tribes would be notified prior to any archaeological or monitoring work to	*Construction* • Same as Alternative 1A • Mitigation same as Alternative 1A *Operation* • Same as Alternative 1A • No Mitigation Required	*Construction* • There are two industrial buildings on the site that are potentially eligible for landmark designation. Neither are exceptional examples of their type or style, and do not have significant architectural merit and likely may be deconstructed or demolished without additional documentation or mitigation. • Considered a “high” to “very high” for the presence of archaeological resources according to the WISAARD predictive model for archaeological sensitivity. Because there is a potential for precontact and historic-period archaeological resources, there could be impacts to

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.

No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
	be done and invited to be present if or when an archaeologist is on site. • An above-ground historic property inventory would occur prior to construction in accordance with the Washington State Standards for Cultural Resources Reporting and any resources identified would be documented and evaluated for significance. The determination will guide whether further consultation with DAHP and KCHPP will be necessary, including potential mitigation of adverse effects. • An Inadvertent Discovery Plan would be prepared by KCSWD and approved by SHPO prior to construction for use during ground disturbing activities. If cultural resources are encountered during construction, work would stop immediately and DAHP would be consulted. Any resources encountered would be documented and evaluated for significance. • If discovery of disturbed archaeological sites occurs, KCSWD will consult with DAHP and affected Tribes about the need to obtain a state archaeological excavation permit. • SWD could hire a professional archaeologist to document the closed Houghton landfill archaeological site using coring, trenching, or other appropriate subsurface methods, and evaluate its		cultural resources during construction, particularly to those areas subject to ground-disturbing activities. • After facility design is complete and prior to construction, KCSWD should conduct survey and/or field investigations. These investigations include completion of a survey report that meets the DAHP reporting standards. • Affected Tribes would be notified prior to any archaeological or monitoring work to be done and invited to be present if or when an archaeologist is on site. • SWD, with KCHPP, should notify the affected Indian Tribes of potential field investigations and provide a draft of any survey reports to KCHPP and affected Indian Tribes for review. • SWD may conduct monitoring during construction in areas that are inaccessible during survey or where excavation will exceed the reach of standard archaeological survey methods. • An Inadvertent Discovery Plan would be prepared by KCSWD and approved by SHPO prior to construction. If cultural resources are encountered during construction, work will stop immediately and DAHP and would be consulted. Any resources encountered would be documented and evaluated for significance.

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.			
No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
	eligibility for listing in the NRHP using approved methods. • SWD should require contractors to train work crews in recognizing archaeological materials and in the appropriate procedures they should follow in the event any such materials are discovered during the project. *Operation* • No operational impacts to historic and cultural resources are anticipated as no further ground disturbance after construction is anticipated. • No Mitigation Required		• If discovery of disturbed archaeological sites occurs, KCSWD will consult with DAHP and affected Tribes about the need to obtain a state archaeological excavation permit. • SWD should require contractors to train work crews in recognizing archaeological materials and in the appropriate procedures they should follow in the event any such materials are discovered during the project. *Operation* • No operational impacts to historic and cultural resources are anticipated as no further ground disturbance after construction is anticipated. • No Mitigation Required.
Section 3.13 Transportation			
Significance of Impact:	Significance of Impact:	Significance of Impact:	Significance of Impact:
Construction • No Impacts • No Mitigation Required *Operation* • SWD would continue to operate the existing Houghton RTS • Traffic volumes are forecast to increase throughout both study areas between existing conditions and the 2029 and 2040 AM and PM peak hours.	*Construction* • Construction would result in an increase in traffic volumes due to workers traveling to and from the site, deconstruction or demolition, export and delivery of material, and truck hauling. Impacts to traffic are anticipated to be minor and temporary. • Site preparation work is expected to last approximately twelvemonths, assuming 12-hour workdays, six days per week.	*Construction* • The existing Houghton RTS would remain open during construction and customer use would not shift to other RTS facilities in the King County system. Alternative 1B may include excavation with structures on piles or excavation to native soils. As a result, for the duration of construction, construction-related traffic (30 to 68 trucks per day) would be added to traffic related to operation of the existing facility.	*Construction* • Construction would result in an increase in traffic volumes due to workers traveling to and from the site, delivery of material, and truck hauling similar to Alternative 1. Impacts to traffic are anticipated to be minor and temporary. • Site preparation work is expected to last approximately twelvemonths, assuming 12-hour workdays, six days per week.

<table>
<tr><th colspan="4">Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.</th></tr>
<tr><th>No Action Alternative</th><th>Action Alternative 1 – Option 1A</th><th>Action Alternative 1 – Option 1B</th><th>Action Alternative 2</th></tr>
<tr>
<td>

No Action Alternative and Alternative 1 study area intersections that do not meet the LOS standard under the No Action Alternative:

NE 68th Street & I-405 Southbound Ramps (2029 and 2040 Weekday AM peak hour, 2040 Saturday PM peak hour, 2040 Weekday PM peak hour)
116th Avenue NE & I-405 Northbound Ramps (2029 and 2040 Weekday PM peak hour)
116th Avenue NE & NE 70th Place (2040 Weekday AM peak hour)

Alternative 2 study area intersections that do not meet the LOS standard under the No Action Alternative:

NE 175th Street & 131st Avenue NE (2029 and 2040 Weekday AM and PM peak hours, 2040 Saturday PM peak hour)
Brickyard Road NE & NE 160th Street (2029 and 2040 Weekday AM and PM peak hours, 2029 and 2040 Saturday PM peak hour)
140th Avenue NE & NE 171st Street (2029 and 2040 Weekday PM peak hour)
Woodinville-Redmond Road NE & NE 175th Street (2040 Weekday AM peak hour)
Woodinville-Redmond Road & NE 124th Street (2040 Weekday PM peak hour)

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Deconstruction or demolition activity would likely require approximately 93 truck round trips of haul away during the initial part of the site preparation period.
Export activity would result in approximately 26 truck trips per day (8,124 round trips total (trucks)) and import activity would result in approximately 17 truck trips per day (5,184 round trips total (trucks).
The estimated daily truck passenger car equivalents (PCE) associated with site preparation would represent up to three percent of existing traffic at study intersections besides the site driveway. The estimated daily truck PCE for the site driveway would represent up to 7.6 percent of the existing intersection volume.
Impacts to property access for sites in the Alternative 1A site study area, including nearby residences and schools, would be minimal. Construction would affect access to the open space areas and active recreation areas of the closed Houghton landfill, but only until access can be restored under the construction plan.
A construction transportation management plan addressing site access, construction vehicle, equipment, and material staging, traffic control, hauling routes, impacts to transit, construction employee parking, impacts to local businesses, and pedestrian and bicycle control in the area would be prepared per City of Kirkland

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Export activity would result in approximately 18-36 truck trips per day (5,511 to 10,964 round trips total (trucks)) and import activity would result in approximately 12 to 32 truck trips per day (3,834 to 9,847 round trips total (trucks).
May result in minor differences in the timing of construction truck traffic due to the altered timing of replacement or repurposing of the existing transfer building compared with Alternative 1A.
The estimated daily truck PCEs associated with site preparation would represent up to 4.7 percent of existing traffic at study intersections besides the site driveway. The estimated daily truck PCE for the site driveway would represent 5.3 to 11.9 percent of the existing intersection volume.
Alternative 1B excavation to native soil would have the highest potential traffic impact during construction (most trucks), while the Alternative 1B with piles would have the lowest potential traffic impact during construction (fewest trucks). Alternative 1A impacts would fall between the Alternative 1B options.
Mitigation same as Alternative 1A

<u>Operation</u>

Operation impacts are expected to be largely similar to those for Alternative 1A. Impacts on roadway network (intersections, traffic volumes, and operations), active transportation facilities,

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Deconstruction or demolition activity would likely require approximately 240 truck round trips of haul away during the initial part of the site preparation period.
Export activity would result in approximately 14 trucks per day (4,460 truck round trips total) and import activity would result in approximately two trucks per day (533 truck round trips total).
The estimated daily truck PCE trips associated with site preparation would represent up to 0.9 percent of existing study intersection volumes, a lower percentage than Alternative 1.
Impacts to property access for sites in the Alternative 2 site study area, including nearby businesses, schools, and farms, would be minimal.
Mitigation same as Alternative 1A and 1B.

<u>Operation</u>

The 2029/2040 trip generation for Alternative 2 is anticipated to increase when compared with the existing condition based on the new facility and tonnage projections. MRW service would also increase traffic to the site compared with Alternatives 1A and 1B.
Alternative 2 would produce new vehicle trips of all types in the study area due to the presence of the new facility when compared with the absence of a facility under the No Action Alternative. All employee and transfer trailer trips would

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Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.			
No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
o Brickyard Road NE & NE Woodinville Drive (2040 Weekday AM peak hour) • Background traffic volumes in the study areas are expected to increase by 2029 and 2040 over the existing conditions. Therefore, there is potential for more crashes within the study area under the No Action conditions compared to existing conditions. • Under the No Action Alternative, waste would continue to not be compacted. Changing from 25 transfer trailers on weekdays and up to seven transfer trailers on weekends (50 weekday trips and 13 weekend trips) under existing conditions to 33 transfer trailers on weekdays and up to 9 transfer trailers on weekends (66 weekday trips and 18 weekend trips) under the No Action Alternative in 2040. • No Mitigation Required	requirements and in coordination with WSDOT as applicable. • Construction would be coordinated with the appropriate city agency for the NERTS facility location to minimize effects to travelers along local roadways. Short-term, temporary lane closures, if required, would be coordinated with local agencies, WSDOT, and the Washington State Patrol as applicable. Coordination with the appropriate City agency and other agencies would also occur during demolition of any existing structures. • If driveway closures are required, access to these properties would be maintained to the extent practical. • If access to a business could not be maintained during construction, the specific construction activity would be reviewed to determine whether it could occur during non-business hours or whether the parking and users of this access could be accommodated at an alternative location. Any properties temporarily impacted during construction would be restored as closely as possible to their previous condition. *Operation* • The tonnage projections are the same between Alternative 1A and the No Action Alternative, however, Alternative 1A would include waste compaction. Therefore, the total project volumes for self-haul,	transit, safety, and freight would be the same as Alternative 1A and with similar comparisons to the No Action Alternative. • Mitigation same as Alternative 1A	be new to the Alternative 2 study area, while some self-haul and commercial vehicle volumes already exist on the roadway network in and around the Alternative 2 study area. Under Alternative 2, the destination for these trips would switch from the existing Houghton RTS to the Alternative 2 site. • In the Alternative 2 study area, in 2029 and 2040, all intersections expected to meet the roadway standards under the No Action Alternative during the AM and PM peak hours would also meet the roadway standards under Alternative 2. • While LOS results would not change or worsen under Action Alternative 2 compared to the No Action Alternative, delays may worsen by more than 5 seconds at several intersections where the LOS standards are not met, including: o NE 175th Street & 131st Avenue NE - Up to 14 second of added average delay in the AM peak hour - Up to 8 seconds of added average delay in the PM peak hour o Woodinville-Redmond Road NE & NE 175th Street - Up to 16 seconds of added average delay in the AM peak hour - Up to 5 seconds of added average delay in the PM peak hour o Woodinville-Redmond Road NE & NE 124th Street

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.

No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
	commercial, and employee vehicles are the same, but Alternative 1A would have fewer transfer trailer vehicle volumes compared to the No Action Alternative. • In the No Action Alternative and Alternative 1A study area, all intersections expected to meet the roadway standards under the No Action Alternative during the AM and PM peak hours would also meet the roadway standards under Alternative 1A for both weekday and Saturday AM and PM peak hours. • The overall vehicular and non-motorized traffic in the Alternative 1A study area under 2029 and 2040 conditions are anticipated to be higher than occurs under existing conditions, with or without the project. Therefore, the potential for traffic safety issues is also likely to increase compared to existing conditions. • Because the background and project volumes are expected to be the same between the No Action Alternative and Action Alternative 1A (except for the slight difference in trucks due to compaction), no difference in vehicular and active transportation safety conditions is anticipated for Alternative 1A compared to the No Action Alternative. • Because the existing Houghton RTS would be closed and deconstructed or demolished at the start of construction, customer use would shift to other RTS facilities in the King County system that		- Up to 5 seconds of added average delay in the AM peak hour - Up to 4 seconds of added average delay in the PM peak hour o Brickyard Road NE & NE 160th Street - Up to 15 second of added average delay in the PM peak hour • None of the project-induced weekday or weekend operating conditions are expected to significantly affect access to businesses or other properties in the study area, including agricultural areas on the east side of the Sammamish River. • Background traffic volumes are expected to increase for 2029 and 2040 over the existing and No Action Alternative volumes. Based on the volume changes in the study area, the average change in crashes is estimated to be up to a 4 percent increase over the No Action conditions. Considering existing crashes, this equates to an increase of up to 3 total crashes per year across the entire study area. • The new NERTS facility would generate approximately 600 vehicles per day on weekdays and weekends in 2040, though there are generally only minor increases in delay expected at the study area intersections as a result of Alternative 2 traffic. • The trail and pedestrian crossing across NE 145th Street and the roundabouts near NE 145th Street and Woodinville-

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.			
No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
	are appropriately zoned and permitted for solid waste handling activities and are able to handle diverted customer trips. • Compliance with the applicable regulations along with implementation of avoidance and minimization measures and non-required mitigation described in Section 3.13.4 would reduce impacts on transportation. • Although not required, potential mitigations that could add to the study area vehicular and active transportation safety include installation of a signal at the NE 60th Street and 116th Avenue NE intersection; and installation of speed feedback signs at locations along NE 60th Street and 116th Avenue NE. These are shown to have the potential to lower speeds and improve safety.		Redmond Road NE/148th Avenue NE are the most likely locations for additional conflicts for active transportation users due to increased active transportation activity. However, the trail crossing is already signalized with additional signing and a refuge area, and the roundabouts include marked and signed crosswalks along with lower speed limits, which significantly help with visibility and reaction time. • Compliance with the applicable regulations along with implementation of avoidance and minimization measures and non-required mitigation described in Section 3.13.4 would reduce impacts on transportation. • For the Woodinville-Redmond Road NE and NE 175th Street intersection in the 2029 and 2040 AM weekday peak hour, additional mitigation could be added as part of the project to reduce delays, including extending the northbound right-turn pocket of the Woodinville-Redmond Road NE and NE 175th Street intersection. • Potential mitigations that could add to the study area vehicular and active transportation safety include: additional signing, warning lights, or pavement markings to improve pedestrian visibility at the intersection of NE 145th Street and Woodinville-Redmond Road NE/148th Street NE; installation of a signal at Brickyard Road NE and NE Woodinville

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.

No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
			Drive; turn restrictions/access changes at Brickyard Road NE & NE 160th Street; and traffic calming measures along Brickyard Road NE to promote lower speeds.
Section 3.14 Public Services and Utilities			
Significance of Impact:	Significance of Impact:	Significance of Impact:	Significance of Impact:
Construction • No Impacts • No Mitigation Required *Operation* • The existing Houghton RTS would continue to operate with no change in levels of demand for public services and utilities. • Refurbishment or replacement of various portions of the sewer, water, communications, and PSE electrical facilities would be required for some facilities at the site that are at the end of their useful life, but no additional services would be required. • The existing stormwater system is currently undergoing evaluation for potential improvement, which would be implemented under the No Action Alternative, and the transfer station would remain under the Stormwater Pollution Prevention Plan (SWPPP) during continued operations. No direct impacts to	*Construction* • Construction impacts could include unintended exposure of construction workers to contaminants and hazardous materials. These conditions could increase the demand for fire and emergency medical services from the Kirkland Fire Department, its partner agency, the Eastside Hazardous Materials Response Team (EHMT), and emergency medical facilities in the City of Kirkland. • Construction could result in minor impacts to schools if construction requires temporary road closures, which could lead to access disruptions. Construction vehicles and construction activities on local roads could also adversely impact access to these resources. • Prior to construction start, KCSWD would prepare and approve a construction management plan to minimize impacts on pedestrians and vehicle safety. Trucks	*Construction* • Construction impacts are expected to be largely similar to those for Alternative 1A. Impacts on water, sanitary sewer, electricity, and communications utilities would be the same as Alternative 1A and with similar comparisons to the No Action Alternative. Impacts on police, fire, emergency medical services, and schools would also be the same as Alternative 1A and similar to the No Action Alternative. • Construction of the new NERTS facility under Alternative 1B would permanently remove approximately six acres of active and passive recreation area north of the existing Houghton RTS. • New capital costs of constructing the new facility could add expense to the average residential curbside customer's bill but, though uncertain at this time, is this added expense is expected to be minimal. • Mitigation same as Alternative 1A *Operation*	*Construction* • Construction impacts are expected to be largely similar to those for Alternative 1. Impacts on water, sanitary sewer, electricity, and communications utilities would be the same as Alternative 1 and with similar comparisons to the No Action Alternative. Impacts on police, fire, emergency medical services, parks, and park facility services would also be the same as Alternative 1A and similar to the No Action Alternative. • Construction could result in minor impacts on access to school resources related to construction vehicles and construction activities on local roads. These impacts could be experienced more notably by users of the Chrysalis High School and Middle School, approximately 0.10 miles to the east directly across Woodinville-Redmond Road NE from the Alternative 2 site.

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<tr><th colspan="4">Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.</th></tr>
<tr><th>No Action Alternative</th><th>Action Alternative 1 – Option 1A</th><th>Action Alternative 1 – Option 1B</th><th>Action Alternative 2</th></tr>
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<td>existing public services and utilities are anticipated from continued operations.</td>
<td>would not block driveways along haul routes.
• Construction would likely disrupt the southern portion of the open field area north of the existing Houghton RTS, the southwestern portion of Fields 1 and 2 parking area, and the access road to Fields 3 and 4. Access to the entire closed Houghton landfill and Taylor fields from these points would have to shift to other access points until it is restored. This disruption would occur during construction and permanently remove those existing areas and access roads totaling approximately three acres.
• Stormwater management would be implemented to avoid adverse stream impacts to the maximum extent possible and would use the construction BMPs referenced in Section 3.14.3.2.1.1
• SWD will adhere to a site-specific Health and Safety Plan that details potential hazards on the site, including from potential contamination and hazardous materials; the Emergency Response Plan for injury or exposure; required training, equipment, and responsibilities of staff; and procedures for alerting Kirkland response agencies and personnel; and identification of emergency routes to nearby hospitals.
• King County would construct a new compressed gravel road between the Fields 1 and 2 parking area and Fields 3</td>
<td>• Impacts on water, sanitary sewer, communications, electricity, and communications utilities would be the same as Alternative 1A and with similar comparisons to the No Action Alternative. Impacts on police, fire, emergency medical services, schools, parks, and park facility services would also be the same as Alternative 1A and similar to the No Action Alternative.
• May result in minor increases in the need for stormwater infrastructure capacity when compared with Alternative 1A and the No Action Alternative. This is due to the larger potential site development area and resulting increase in storm flows that would need control through on-site erosion control BMPs.
• Mitigation same as Alternative 1A</td>
<td>• A construction management plan describing procedures for construction activity such as truck routes and hours of operation would be developed and approved by KCSWD (see Section 3.13). This would serve to minimize impacts on access to the school to a less than significant level.
• If driveway closures are required, King County would work with Chrysalis School, Northshore School District, City of Woodinville Parks, Development Services, and Public Works departments, local and neighborhood stakeholders, and the contractors to develop a construction transportation plan that maintains access to these properties to the extent practical, particularly during drop-off and pick-up times.
New capital costs of constructing the new facility could add to the average residential curbside customer's bill, though the amount is uncertain at this time.
<u>Operation</u>
• Impacts on water, sanitary sewer, communications, electricity, and communications utilities would be the same as Alternative 1 and with similar comparisons to the No Action Alternative. Impacts on police, fire, emergency medical services, schools, parks, and park facility services would also be the same as Alternative 1 and similar to the No Action Alternative.</td>
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Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.

No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
	and 4 to provide access during construction and following completion of construction. King County is also proposing to enhance the baseball field facilities and add supplemental recreation facilities and amenities at Taylor Fields. King County would confer with City of Kirkland and neighborhood stakeholders to identify appropriate mitigation. • King County would work with Lake Washington School District, City of Kirkland Parks Department, State Parks Commission, local and neighborhood stakeholders, and the contractors to minimize and avoid use of study area roadways by construction vehicles where nearby school and park access is provided. • New capital costs of constructing the new facility could add to the average residential curbside customer's bill, though the amount is uncertain at this time. *Operation* • It is anticipated that operation would not result in substantial demand on the water supply, sanitary sewer system, electric service, natural gas service, communications, fire, EMS, or police, or schools and other community facilities, and would not affect the capacity of the system to meet demand. • Once operational, the new stormwater infrastructure would have a greater capacity than the No Action Alternative to		• The facility would be in close proximity of several recreational trails and the byproducts of operations (noise, odor, traffic, and noise) could affect trail users as they traverse the area. Design features and mitigation measures would minimize the effects of these operational byproducts for users. Noise levels would be below the maximum levels allowed within any one-hour period. Users would experience these noise levels for only very short durations; therefore, the impacts are expected to be minor. • Once operational, the new stormwater system would have a greater capacity than the No Action Alternative and about the same capacity as Alternative 1 to reduce impacts from potential stormwater pollution and high stormwater flows. • Mitigation same as Alternative 1A and 1B.

Table S-3.Summary of Alternatives, Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts.

No Action Alternative	Action Alternative 1 – Option 1A	Action Alternative 1 – Option 1B	Action Alternative 2
	reduce impacts from potential stormwater pollution and high stormwater flows. • Provide fire and emergency service workers with a full set of updated Safety Data Sheets (formerly Material Safety Data Sheets) for hazardous chemicals used on site. • Provide all schools in the study areas with input on their emergency response plans to cover potentially hazardous situations arising from RTS operations. • Install permanent traffic-calming measures, if needed, to ensure access for students, staff, and faculty of schools. • Install air and odor monitoring equipment at select schools in the selected site's study area that alerts School District Staff and KCSWD in case of regulatory exceedances. • Identify and evaluate future service system needs through collaborative planning between KCSWD and utility and service providers. • Evaluate and implement improvements to recreation facilities in the study areas, including Taylor Fields; local and regional bike paths and bike lanes; pedestrian, bike, and equestrian crossings on site-adjacent roadways. • Construction and operation of LEED compliant (or similar ranking system) buildings would reduce the power and water requirements for the facilities.		