

3.6 Vegetation, Fish, and Wildlife

This section describes the vegetation, fish, and wildlife, including the presence of threatened and endangered species and designated critical habitat, in the study areas, and the potential for impacts from implementation of the action alternatives, compared with the No Action Alternative.

This environmental review determined that there would be no significant unavoidable adverse impacts to vegetation, fish, and wildlife during construction or operation of any of the alternatives.

3.6.1 Regulatory Context

Vegetation, fish, and wildlife are subject to a variety of federal, state, and local regulations that will apply to any future development or facility operation at the action alternative sites.

3.6.1.1 Federal Regulations

The U.S. Fish and Wildlife Service (USFWS) regulates species and habitats under the following regulations:

- Endangered Species Act (ESA) (Section 7 and Section 4(d); 50 CFR, Part 402)
- Migratory Bird Treaty Act (16 U.S.C. 703-712 and 50 C.F.R. 10.12-13)
- Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c and 50 CFR 10, 13, and 22.26)

The National Marine Fisheries Service (NMFS) regulates species and habitats under the following regulations:

- ESA (Section 7 and Section 4(d); 50 CFR, Part 402)
- Magnuson-Stevens Fishery and Conservation Act (as amended by the Sustainable Fisheries Act of 1996, Public Law 104-267)

The USACE regulates the placement of dredged or fill material in “waters of the United States,” including streams and wetlands, under Section 404 of the Clean Water Act (CWA). Streams and wetlands provide habitat for wildlife and fish. The USACE requires compliance with the ESA for all Section 404 permits.

3.6.1.2 State Regulations

The WDFW regulates species and habitats under Chapter 75.20 RCW and Chapter 220-110 WAC. The Natural Area Preserves Act (Chapter 79.70 RCW) established the Washington Natural Heritage Program within the Washington State Department of Natural Resources (WDNR) to manage site-specific vegetation and species/ecosystem-specific information on priority species and ecosystems, including those that are rare or have very limited distribution. Ecology regulates water quality, which provides habitat for wildlife and fish under the following:

- NPDES – Construction Stormwater General Permit (Chapter 90.48 RCW; Chapter 176-226 WAC)
- NPDES – Industrial Stormwater General Permit (Chapter 90.48 RCW; Chapter 176-226 WAC)

- Section 401 of the CWA under the Water Quality Certification program

Washington State Solid Waste Handling Standards Chapter 173-350-310 WAC addresses vector wildlife that may be a nuisance (e.g., rodents, insects, gulls, pigeons, crows) and requires operators to demonstrate how waste will be managed to control vectors.

The project must also comply with the Washington State noxious weed law (Chapter 17-10 RCW, Chapter 16-750 WAC). The King County Noxious Weed Control Board administers the state noxious weed law within King County. Each year, the Board adopts the King County Noxious Weed List, which specifies which noxious weeds property owners are required to control in the County. The County weed list includes additional species that landowners are not required to control but for which control is recommended.

3.6.1.3 Local Laws, Plans, and Policies

The King County Solid Waste Code regulates vector wildlife that may be a nuisance through control of litter and municipal waste (King County Code 10.04.040 and 10.04.080).

City and county critical/environmentally sensitive area codes that are established under the GMA regulate activities that may impact vegetation, fish, and wildlife. The local regulations vary from jurisdiction to jurisdiction, but these codes generally specify which activities require permits, widths of required buffers,¹⁰ and compensatory mitigation ratios for impacts to these resources. King County lists species protected in **the County's Comprehensive Plan via the Critical Areas Ordinance**. This list is currently being updated for the 2024 update to the King County Comprehensive Plan.

The No Action Alternative and Alternative 1 site is in the City of Kirkland, and activities that have the potential to impact vegetation, fish, and wildlife at the site are regulated according to City of Kirkland Zoning Code Chapter 90, Critical Areas: Wetlands, Streams, Minor Lakes, Fish and Wildlife Habitat Conservation Areas, and Frequently Flooded Areas. The Alternative 2 site is in the City of Woodinville, and activities that have the potential to impact vegetation, fish, and wildlife at the site are regulated according to City of Woodinville Municipal Code Chapter 21.51, Critical Areas.

3.6.2 Affected Environment

3.6.2.1 Study Area

At each site, the study area for review of vegetation, fish, and wildlife that could be impacted by development of the action alternatives was defined as the site plus the area within a quarter-mile of the site boundaries (Figure 3.6-1 and Figure 3.6-2). Some additional areas further away from the primary study area are also considered for potential impact due to the connectivity of fish and wildlife habitats across wider areas.

¹⁰ A buffer is a designated area contiguous to a steep slope or landslide hazard area intended to protect slope stability, attenuation of surface water flows and landslide hazards, or a designated area contiguous to and intended to protect and be an integral part of an aquatic area or wetland (King County Code 21A.06.122).



Legend

- Alternative Location
- 0.25-mile Study Area
- Alternative 1A
- Alternative 1B

- ~ Streams
- Waterbody
- Riverine Wetland
- Biodiversity Areas and Corridor (WDFW)

Fish Passage Barriers

- On a Non-Fish Bearing Stream
- ~ Fall Chinook, Sockeye, Winter Steelhead (SWIFD)

Figure 3.6-1. Vegetation, Fish, and Wildlife in the No Action Alternative and Action Alternative 1 Study Area.



SCALE: 1" = 800'-0"
 0 400 800 Feet





Legend

- Alternative Location
- ▭ 0.25-mile Study Area
- ▭ Alternative 2
- Streams
- Waterbody
- FEMA 100-Year Floodplain
- Wetland

- 79.8ft Wetland Buffer
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Riverine Wetland
- Aquatic Habitat (WDFW)

- Conservation and Native Growth Protection Easements*
- Fish Passage Barriers
- Not a barrier
- ▲ Partial Fish Passage Blockage
- ▲ Total Fish Passage Blockage

- On a Non-Fish Bearing Stream
- Coho, Dolly Varden/ Bull Trout, Fall Chinook, Kokanee, Largemouth Bass, Rainbow Trout, Resident Coastal Cutthroat, Sockeye, Winter Steelhead (SWIFD)



Figure 3.6-2. Vegetation, Fish, and Wildlife in the Action Alternative 2 Study Area.

SCALE: 1" = 800'-0"

0 400 800 Feet



King County

*Derived from City of Woodinville Critical Area Wetlands, NGPE, and Open Space 2021 (City of Woodinville 2021a)

3.6.2.2 No Action Alternative and Alternative 1

The study area for the No Action Alternative and Alternative 1 consists of the existing Houghton RTS and closed landfill at 11724 NE 60th Street in Kirkland and the area within a quarter-mile of the site boundaries (Figure 3.6-1).

3.6.2.2.1 Vegetation

The operational portion of the Houghton RTS is paved and built out with a border of arborvitae hedges (*Thuja* sp.) along the western and northern boundaries. Vegetation in the closed landfill area consists primarily of mowed grasses and Himalayan blackberry (*Rubus armeniacus*). South of the transfer station, across NE 60th Street is Bridle Trails State Park, a 489-acre day-use park. Within the study area, the park contains densely vegetated, mixed deciduous-coniferous forest with equestrian/hiking trails. Bridle Trails State Park is mapped by WDFW as a Priority Habitat Biodiversity Area and Corridor (Figure 3.6-1) (WDFW 2023a). The transfer station and closed landfill are bordered to the west, north, and east by single-family residential development with mixed landscape trees, shrubs, and grasses. The Interstate 405 corridor is within the study area approximately 600 feet west of the transfer station. No rare plants or rare plant communities are mapped in the study area by the Washington Natural Heritage Program (WDNR 2023).

3.6.2.2.2 Fish

King County (2023) maps Yarrow Creek in the northwest corner of Bridle Trails State Park, approximately 140 feet south of the No Action Alternative and Alternative 1 site (Figure 3.6-1). The creek flows south for approximately 2.95 miles through the state park and residential areas in the cities of Bellevue and Kirkland to its outlet at Lake Washington along the northeastern shoreline. The creek historically supported coho salmon (*Oncorhynchus kisutch*) (King County 2023b). Kokanee (*O. nerka*) were presumed to use Yarrow Creek based on historical records of a Native American village located near its mouth (King County 2016). According to WDFW fish passage data Yarrow Creek within the state park contains the physical criteria to potentially support use by coho, steelhead trout (*O. mykiss*), and resident cutthroat trout (*O. clarkii*) (WDFW 2023b). However, much of the creek downstream of Bridle Trails State Park has been piped to accommodate development in the basin and potential for fish use is very low due to several partial or total fish barriers that limit accessibility (WDFW 2023b).

3.6.2.2.3 Wildlife

Bridle Trails State Park is on the south side of NE 60th Street, directly south of the existing Houghton RTS. According to WDFW Priority Habitats and Species data (WDFW 2023a), the state park contains a powerline right-of-way that provides a wildlife migration area to and from the park. This area is known to provide habitat to numerous species of birds (see Appendix J: List of Birds for Bridle Trails State Park) as well as bobcats (*Lynx rufus*), coyotes (*Canis latrans*), raccoons (*Procyon lotor*), Douglas squirrels (*Tamiasciurus douglasii*), northern flying squirrels (*Glaucomys sabrinus*), bats (multiple species), and other small mammals, reptiles, and amphibians. Black bear (*Ursus americanus*) and Columbian black-tailed deer (*Odocoileus hemionus columbianus*) are occasional transient species in the state park. Wildlife species

likely use the former landfill area north of the proposed No Action Alternative and Alternative 1 site for foraging and nesting. Wildlife at the site also includes pollinators, such as bees, butterflies, and hummingbirds. No threatened or endangered species are known to be within the study area (WDFW 2023a).

Vector wildlife that may be a nuisance (e.g., rodents, insects, gulls, pigeons, crows) is controlled at the existing Houghton RTS. BMPs and operational procedures defined by regulatory codes and solid waste industry practices control nuisance wildlife (see Section 3.8, Environmental Health). BMPs include limiting the time the waste sits on site by following the rule of first in, first out, so that fully loaded transfer trailers are removed from the station in the order that they are filled and cleaning the station on a regular basis. In addition, the tipping floor would be cleared at the end of each day and waste stored in the sealed compactor, and the tipping floor cleaned regularly.

3.6.2.3 Alternative 2

The Alternative 2 site is located in the 15000 block of Woodinville-Redmond Road NE in Woodinville on six King County tax parcels 1526059086, 5711600010, 5711600020, 5711600030, 1526059094, and 1526059095, and the study area includes the area within a quarter-mile of the site boundaries (Figure 3.6-2).

3.6.2.3.1 Vegetation

The northern extent of the Alternative 2 site (parcels 1526059086, 5711600010, 5711600020, and 5711600030) is currently in commercial uses and is largely unvegetated. The southern portion of the site (parcels 1526059094 and 1526059095) is undeveloped and includes a wetland delineated in 2012 and shown in Woodinville critical areas mapping (Shockey 2013) (City of Woodinville 2016). This wetland was dominated by an emergent plant community which included reed canarygrass (*Phalaris arundinacea*), soft rush (*Juncus effusus*), common velvetgrass (*Holcus lanatus*), and tall buttercup (*Ranunculus acris*). Sitka willow (*Salix sitchensis*), hardhack (*Spiraea douglasii*), and Himalayan blackberry were also present. The delineation and rating of this wetland were updated in 2024. Additional detail is provided in Section 3.5, Wetlands. The Alternative 2 site is bordered to the north, south, and east by commercial and light industrial uses. The site is bordered to the west by an abandoned BNSF railroad right-of-way, and beyond that is a relatively undisturbed forested slope that extends approximately one mile to the north. Woodinville critical area mapping designates a portion of this forested area within the study area as a Native Growth Protection Easement (NGPE) (City of Woodinville 2021a). The NGPE constitutes the northern portion of Parcel 3175100000.

The NWI maps a freshwater emergent wetland on the eastern bank of the Sammamish River at the eastern boundary of the study area (USFWS 2023). Woodinville critical areas mapping depicts one wetland approximately 240 feet west of Alternative 2 site Parcel 5711600010 (City of Woodinville 2016) (see Section 3.5, Wetlands).

There are no rare plants or rare plant communities known to occur in the study area (WDNR 2023).

3.6.2.3.2 Fish

The Sammamish River flows in the eastern portion of the study area approximately 1,000 feet to the east of the Alternative 2 site and provides stream and riparian habitat for wildlife. The Sammamish River is a migration corridor connecting Lake Washington, Lake Sammamish, and upstream tributaries and is used by a variety of salmonids such as sockeye (*O. nerka*), coho, Chinook (*O. tshawytscha*), and kokanee salmon, and steelhead, coastal cutthroat (*O. clarkii*), and bull trout (*Salvelinus malma*) (WDFW 2023c). Bull trout and Puget Sound Chinook salmon and steelhead are federally listed as threatened under the ESA, and bull trout is a candidate for state listing (WDFW 2023d). Other native fish inhabiting the Sammamish River include peamouth (*Mylocheilus caurinus*), northern pikeminnow (*Ptychocheilus oregonensis*), longnose dace (*Rhinichthys cataractae*), largescale sucker (*Catostomus macrocheilus*), threespine stickleback (*Gasterosteus aculeatus*), sculpin (*Cottus* sp.), and western brook lamprey (*Lampetra richardsoni*) (King County 2023i).

King County (2023) maps one unnamed stream at the southern boundary of the site for Alternative 2. The stream is depicted as a tributary to the Sammamish River that flows east along the southern boundary of Parcel 1526059095, through a culvert under Woodinville-Redmond Road NE, and in a ditch between industrial properties. King County does not classify the mapped stream, and WDFW does not characterize a fish passage barrier at the culvert crossing of Woodinville-Redmond Road NE (WDFW 2023b). Woodinville critical areas map (City of Woodinville 2016) classifies the western extent of the King County mapped stream as wetland. The mapped wetland is approximately 75 feet west of Parcel 1526059095 and the southwest corner of the study area for Alternative 2. WDFW (2023b) maps an intermittent/ephemeral stream that appears to flow north or south adjacent to the western boundary of the study area for Alternative 2.

King County (2023) and the City of Woodinville (2016) map two additional unnamed streams in the western portion of the study area, west of the Alternative 2 site. The northernmost stream, which includes a small tributary which joins with the main tributary west of the study area, is depicted as a tributary to the Sammamish River that flows east within the northern portion of the study area. King County and Woodinville do not classify this stream. The additional unnamed stream flows west to east in the western portion of the study area, likely infiltrating into the surface west of the Alternative 2 site (King County 2023c and Woodinville 2016). No connection to the Sammamish River is mapped for this stream.

3.6.2.3.3 Wildlife

Given the connectivity to a wooded corridor, it is likely that wetland-associated birds, as well as coyotes, raccoons, mountain beavers (*Aplodontia rufa*), and other small mammals, reptiles, and amphibians use the wetland habitat in the undeveloped portion of the Alternative 2 site. This use may be limited, however, as the 2024 updated rating of this wetland found the wetland has a low level of function for wildlife habitat (see Section 3.5). The adjacent wooded corridor is likely used by larger mammals, such as black bears, cougars (*Puma concolor*), bobcats, and Columbian black-tailed deer. The Sammamish River, within the study area to east, provides riparian habitat for wildlife, including numerous species of birds (see Appendix N: List of Birds for Sammamish River Trail). The Sammamish River is largely disconnected terrestrially from the

Alternative 2 site by Woodinville-Redmond Road NE and commercial development, and connectivity to the river via the unnamed stream at the southern boundary of the site is limited by a culvert crossing. Birds may move freely between the Sammamish River corridor and the wooded corridor west of the Alternative 2 site. These natural corridors provide important migratory pathways as well as foraging and breeding habitat for wildlife. Wildlife at the site also includes pollinators, such as bees, butterflies, and hummingbirds. No threatened or endangered terrestrial species (not including listed fish species) are known to be within the study area.

3.6.3 Environmental Impacts

3.6.3.1 *No Action Alternative*

Under the No Action Alternative, no construction activities would occur, and there would be no disturbance to existing habitat conditions on or adjacent to the site, so there would be no impacts to vegetation, fish, or wildlife from construction.

Under the No Action Alternative, KCSWD would continue to operate the existing Houghton RTS. The existing level of noise and other activities would continue, and species using this area are likely already adapted to that level of disturbance. Wildlife would continue to actively use and pass between the site and Bridle Trails State Park directly south of the site. Impacts to vegetation, fish, and wildlife would be negligible under the No Action Alternative because ongoing operations would not alter existing habitat conditions on or adjacent to the site. Vector wildlife at the existing Houghton RTS would continue to be present and could be considered a nuisance by some neighbors but would be controlled by BMPs and operational procedures in place (see Section 3.8, Environmental Health).

3.6.3.2 *Impacts Common to All Action Alternatives*

3.6.3.2.1 Impacts from Construction

3.6.3.2.1.1 *Direct Impacts*

Under all action alternatives, construction is anticipated to last approximately 30 months. During this time, construction noise would occur. Short-term construction activities that produce noise, such as equipment use, truck traffic, pile driving, or steel riveting, could cause temporary disturbance and/or dispersal of wildlife away from the site. Construction noises would be temporary and limited to a small area, and any wildlife on-site or nearby would have sufficient space to disperse. Negligible wildlife impacts are anticipated from construction noise under all action alternatives.

Under all action alternatives, there would be an increased risk for erosion and runoff and temporary effects to water quality during construction clearing and grading and development of the site. An NPDES Construction Stormwater General Permit would be required and would include a Temporary Erosion and Sedimentation Control plan and BMPs that would be implemented in accordance with the SWPPP. These plans would include measures to control dust that could affect wildlife. There is also potential for leaks and spills from heavy equipment that could affect wildlife, but a Spill Prevention Control and Countermeasures

plan would be developed to minimize these risks (see Section 3.3, Water). BMPs would include the following:

- Develop and implement a temporary erosion and sediment control (TESC) plan.
- Control erosion at the source, when possible.
- Intercept and convey surface water from disturbed areas to sediment ponds.
- Properly identify clearing limits before clearing.
- Provide perimeter protection (e.g., silt fence) downslope of areas to be disturbed before construction.
- Provide stabilized construction entrances to limit the tracking of sediment off the construction area.

Under all action alternatives, site development would require clearing of some amount of upland vegetation and the loss of associated wildlife habitat. Upland vegetation at the sites is adjacent to developed areas and provides limited value as wildlife habitat. To the extent practicable, site development would minimize clearing of vegetation that may provide habitat for wildlife. Impacts from the removal of upland vegetation are expected to be negligible. Construction would likely involve the export of material with non-regulated or regulated noxious weeds. Any material with these species would need to be hauled off-site and disposed of appropriately according to the King County Noxious Weed Control Program.

3.6.3.2.1.2. Indirect Impacts

Construction impacts include the loss of wildlife habitat, which in turn could have indirect impacts on processes dependent on wildlife, such as the role of pollinators in agriculture. These impacts are unlikely to be significant and would be offset with additional native plantings supportive of pollinator species.

3.6.3.2.2 Impacts from Operation

3.6.3.2.2.1. Direct Impacts

Under all action alternatives, impacts to vegetation, fish, and wildlife from operational noise, light, and glare are anticipated to be negligible. There is currently disturbance from noise, light, and glare at both sites: at the Alternative 1 site from the existing Houghton RTS, and at the Alternative 2 site from activities associated with commercial development. Operation of a modern transfer station in a fully enclosed building would likely generate less noise, light, and glare and therefore cause less disturbance than existing conditions (See Section 3.11, Aesthetics, Light, and Glare). Per Section 2.2.2.1, the overall height of the new station would be approximately 70 feet above its lowest level, potentially making the building taller than existing buildings at both sites, though building dimensions are yet to be determined. Under all action alternatives, light and glare from a taller building could pose an impediment to migration and regular movement of birds. 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 (See Section 3.11). Given existing development at both sites and the

mitigating factors described above, the height of the new transfer station is not anticipated to cause significant impacts to birds.

All of the alternatives (including the No Action Alternative) would result in an increase in traffic noise from transfer truck trips due to expected population growth and a resulting increase in waste disposed in the northeast area of King County. However, by using waste compactors, the action alternatives would decrease the number of transfer truck trips and resulting traffic noise, when compared with the No Action Alternative.

Air toxics from vehicle emissions can harm wildlife from direct exposure and by deposition onto soils and surface waters, where they are taken up by plants and ingested by animals and magnified through the food chain. As described in Section 3.2, for all criteria air pollutants (CAPs) and mobile source air toxics (MSATs), all action alternatives produce lower emissions than the No Action Alternative in 2029 and 2040. Some vehicle emissions under Alternative 2, however, would be a new source in the Alternative 2 site area. Concentrations of air toxics from vehicle emissions generally decrease to background levels within about 500-600 feet downwind from the vicinity of the source (EPA 2014). Vehicle emissions from operational activities under any of the action alternatives 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.

Stormwater treatment at the site is anticipated to minimize or eliminate impacts to vegetation, fish, and wildlife and associated wildlife habitat in accordance with King County and local jurisdictional surface water design manuals (see Section 3.3, Water). For any of the action alternatives, the proposed action would have beneficial direct effects on the stormwater system at each site. The project would reduce impacts 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, which would be an improvement compared with the No Action Alternative (see Section 3.8, Environmental Health).

The increase in impervious surface from all action alternatives has the potential to impact wetlands and streams down-basin from project activities. Increased area of impervious surfaces and surface water pollution can generate polluted surface water flows which travel down-gradient into wetlands and streams, affecting fish and wildlife habitat. Because the increase in impervious surface is expected to be small in relation to existing development at the sites, impacts to fish, wildlife, and associated habitat are expected to be negligible.

Under all action alternatives, vector wildlife would be present during operation of the facility, but it would be controlled according to standard industry practices and operating plans as required by state regulations and King County Code (see Section 3.8, Environmental Health). Vector wildlife control methods could include the use of pesticides and other substances, which presents 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 would result in minimal risks to raptors and other predators under the action alternatives.

3.6.3.2.2. Indirect Impacts

No indirect impacts to vegetation, fish, or wildlife are anticipated from operation under any of the action alternatives.

3.6.3.2.3 Cumulative Impacts

Under all action alternatives, transfer station activities and operations would contribute incrementally to the cumulative past, present, and reasonably foreseeable future impacts on vegetation, fish, and wildlife in the region due to ongoing development within King County. Cumulative impacts of the alternatives are discussed separately below.

3.6.3.3 Alternative 1A

3.6.3.3.1 Impacts from Construction

3.6.3.3.1.1 Direct Impacts

All project impacts, regulatory requirements, and cumulative impacts related to vegetation, fish, and wildlife under Alternative 1A would include those described previously in Section 3.6.3.2, Impacts Common to All Action Alternatives.

Under Alternative 1A, there are no wetlands or streams on or directly adjacent to the Alternative 1A site, and with BMPs in place, negligible impacts to vegetation, fish, and wildlife are anticipated from erosion and runoff during construction (see Section 3.3, Water).

Under Alternative 1A, cleared vegetation would likely be mowed grasses and Himalayan blackberry, providing limited habitat value. Therefore, negligible impacts to wildlife habitat are anticipated from vegetation clearing during construction. 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 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. Impacts under Alternative 2 are discussed in Section 3.6.3.5.

3.6.3.3.1.2 Indirect Impacts

Impacts due to loss of wildlife habitat under Alternative 1A are anticipated to be negligible, so there would be no indirect impacts to processes dependent on wildlife.

3.6.3.3.2 Impacts from Operation

3.6.3.3.2.1 Direct Impacts

All project impacts, regulatory requirements, and cumulative impacts related to vegetation, fish, and wildlife under Alternative 1A would include those described previously in Section 3.6.3.2, Impacts Common to All Action Alternatives.

Under Alternative 1A, there are no wetlands or streams on or directly adjacent to the Alternative 1A site, and with BMPs in place, including the new stormwater management system, no operational impacts to vegetation, fish, or wildlife are anticipated from stormwater runoff (see Section 3.3, Water).

3.6.3.3.2. Indirect Impacts

See Section 3.6.3.2, Impacts Common to All Action Alternatives, above.

3.6.3.3. Cumulative Impacts

Under Alternative 1A, transfer station activities and operations would contribute incrementally to the cumulative overall past, present, and reasonably foreseeable future impacts on vegetation, fish, and wildlife in the region due to ongoing development within King County. **In Kirkland's Bridle Trails neighborhood** immediately surrounding the site of Alternative 1A, two transportation projects are currently under construction, Citywide Greenways Network – NE 75th Street Greenway, and 122nd Avenue NE Traffic Calming, as well as another six capital projects that are in the design or pre-design phase (City of Kirkland 2023e). As Alternative 1A would replace the aging and undersized existing Houghton RTS in the same general location, the beneficial effects of the new facility can be compared directly with the existing condition. The negligible impacts on vegetation, fish, and wildlife from construction and operation of the new transfer station would likely be offset by a beneficial cumulative reduction in noise disturbance in the area due to the modern, enclosed facility.

3.6.3.4 Alternative 1B

3.6.3.4.1 Impacts from Construction

3.6.3.4.1.1. Direct Impacts

All project impacts, regulatory requirements, and cumulative impacts related to vegetation, fish, and wildlife under Alternative 1B would include those described previously in Section 3.6.3.2, Impacts Common to All Action Alternatives.

Under Alternative 1B, the potential site development area is approximately 12.8 acres, slightly larger than the potential site development area of approximately 10 acres under Alternative 1A. Consequently, there would likely be more vegetation clearing required for construction of Alternative 1B. As in Alternative 1A, cleared vegetation would likely be mowed grasses and Himalayan blackberry that provide limited habitat value. The larger area of vegetation clearing under Alternative 1B is not expected to result in a significantly greater loss of wildlife habitat compared with Alternative 1A, and impacts to wildlife habitat are anticipated to be negligible. 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. Impacts under Alternative 2 are discussed in Section 3.6.3.5.

Other direct impacts from construction under Alternative 1B are the same as those described for Alternative 1A above.

3.6.3.4.1.2. Indirect Impacts

Impacts due to loss of wildlife habitat under Alternative 1B are anticipated to be negligible, so there would be no indirect impacts to processes dependent on wildlife.

3.6.3.4.2 Impacts from Operation

3.6.3.4.2.1. Direct Impacts

All project impacts, regulatory requirements, and cumulative impacts related to vegetation, fish, and wildlife under Alternative 1B would include those described previously in Section 3.6.3.2, Impacts Common to All Action Alternatives.

Direct impacts from operation under Alternative 1B are the same as those described for Alternative 1A above.

3.6.3.4.2.2. Indirect Impacts

See Section 3.6.3.2, Impacts Common to All Action Alternatives, above.

3.6.3.4.3 Cumulative Impacts

Cumulative impacts under Alternative 1B are the same as those described for Alternative 1A above.

3.6.3.5 Alternative 2

3.6.3.5.1 Impacts from Construction

3.6.3.5.1.1. Direct Impacts

All project impacts, regulatory requirements, and cumulative impacts related to vegetation, fish, and wildlife under Alternative 2 would include those described previously in Section 3.6.3.2, Impacts Common to All Action Alternatives.

Under Alternative 2, there is a wetland on the Alternative 2 site and a stream directly adjacent to the Alternative 2 site. There is potential for minor impacts to vegetation, fish, and wildlife from erosion and runoff during construction, but BMPs are expected to reduce these impacts to less than significant (see Section 3.3, Water).

Under all action alternatives, site development would require clearing of some amount of upland vegetation and the loss of associated wildlife habitat (see Section 3.6.3.2, Impacts Common to All Action Alternatives, above). Under Alternative 2, there is also potential for impacts to wetland and buffer vegetation. While development of the site would avoid and minimize clearing of vegetation in the wetland and wetland buffer, there is the potential that a portion of the vegetated wetland buffer may not be avoided during construction. Impacts to vegetation would be minimized through BMPs, such as demarcated clearing limits, and if impacts to the wetland or buffer cannot be avoided, mitigation would be required that achieves equivalent or greater functions than the lost area (see Section 3.5, Wetlands). Given the low level of wildlife habitat

function of the wetland, BMPs to minimize impacts to vegetation, and mitigation for wetland and buffer impacts, impacts to wildlife habitat under Alternative 2 are anticipated to be less than significant. 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. Impacts under Alternative 1A are discussed in Section 3.6.3.3, and impacts under Alternative 1B are discussed in Section 3.6.3.4.

3.6.3.5.1.2. Indirect Impacts

The Alternative 2 site is located approximately a quarter-mile west of the Sammamish Valley Agricultural Production District (APD), and native wildlife such as pollinators are important to agricultural practices. Impacts due to loss of wildlife habitat under Alternative 2, including impacts to pollinator habitat, are not anticipated to be significant, so no significant indirect impacts to the APD are expected from this loss of habitat. See Section 3.2 for a discussion of air quality and emissions impacts on agricultural lands. Section 3.3 discusses water connectivity between the Alternative 2 site and the Sammamish River and control of runoff, spills, and leaks. Section 3.9 discusses separation of the Alternative 2 site from the APD by Woodinville-Redmond Road NE, industrial properties, and the river itself, and Section 3.10 discusses noise attenuation.

3.6.3.5.2 Impacts from Operation

3.6.3.5.2.1. Direct Impacts

All project impacts, regulatory requirements, and cumulative impacts related to vegetation, fish, and wildlife under Alternative 2 would include those described previously in Section 3.6.3.2, Impacts Common to All Action Alternatives.

Under Alternative 2, there is a wetland on the Alternative 2 site and a stream directly adjacent to the site. There is potential for minor impacts to vegetation, fish, and wildlife from contaminated stormwater runoff during operation of the facility. Surface water pollution from vehicles includes heavy metals, polycyclic aromatic hydrocarbons (PAHs), antifreeze, and 6PPDQ. The addition of impervious surface could increase the temperature of runoff into surrounding streams, including the Sammamish River. BMPs described in Section 3.3, including the new stormwater management system, are expected to reduce these impacts to less than significant. These BMPs (e.g., rain gardens, bioswales, green roofs, vegetated swales) will also use the best available science to mitigate impacts from increased water temperatures due to additional impervious surfaces.

3.6.3.5.2.2. Indirect Impacts

See Section 3.6.3.2, Impacts Common to All Action Alternatives, above.

3.6.3.5.3 Cumulative Impacts

Under Alternative 2, transfer station activities and operations would contribute incrementally to the cumulative overall past, present, and reasonably foreseeable future impacts on vegetation, fish, and wildlife in the region due to ongoing development within King County. The **City of Woodinville's Development Services** website lists twelve capital projects in progress (City of Woodinville 2023a). The minor impacts on vegetation, fish, and wildlife from construction and operation of the new transfer station would contribute to a cumulative loss of fish and wildlife habitat from other development activities in the Woodinville area.

3.6.4 Mitigation Measures

3.6.4.1 No Action Alternative

No mitigation measures are required.

3.6.4.2 Alternative 1

3.6.4.2.1.1 During Construction

The following mitigation measures would be implemented during construction to minimize impacts to vegetation, fish, and wildlife:

- 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.

3.6.4.2.1.2 During Operation

Under Alternative 1, no mitigation measures are necessary because with BMPs in place, no operational impacts to vegetation, fish, or wildlife are anticipated.

3.6.4.3 Alternative 2

3.6.4.3.1.1 During Construction

The following mitigation measures would be implemented during construction to minimize impacts to vegetation, fish, and wildlife:

- The existing wetland boundary would be delineated and clearly marked prior to construction so that it may be avoided to 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.

- 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.

3.6.4.3.1.2. During Operation

Existing wetlands, streams, and associated habitat would be clearly marked and avoided during operation of the new transfer station to minimize impacts to vegetation, fish, and wildlife.

3.6.5 Significant Unavoidable Adverse Impacts

3.6.5.1 No Action Alternative

No significant unavoidable adverse impacts to vegetation, fish, or wildlife are anticipated.

3.6.5.2 Alternative 1

Compliance with the applicable regulations along with implementation of the mitigation measures described in Section 3.6.4.2 would reduce impacts to vegetation, fish, and wildlife. No significant unavoidable adverse impacts to vegetation, fish, or wildlife are anticipated.

3.6.5.3 Alternative 2

Compliance with the applicable regulations along with implementation of the mitigation measures described in Section 3.6.4.3 would reduce impacts to vegetation, fish, and wildlife. No significant unavoidable adverse impacts to vegetation, fish, or wildlife are anticipated.