

Operations and Maintenance Facility South

NEPA Draft / SEPA Supplemental Draft Environmental Impact Statement

Appendix A: Environmental Impact Statement Support Information



September 2023

Appendix A: Draft Environmental Impact Statement Support Information

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Appendix A1 - List of Preparers

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Appendix A2 – Distribution List

Federal Agencies

Bonneville Power Administration

Federal Aviation Administration, Northwest Mountain Region

Federal Highway Administration, Washington State Division

National Oceanic and Atmospheric Administration, Fisheries (NOAA Fisheries)

U.S. Army Corps of Engineers

U.S. Bureau of Indian Affairs, Northwest Region

U.S. Fish and Wildlife Service

U.S. Environmental Protection Agency, Region 10

Tribes

Muckleshoot Indian Tribe

Nisqually Indian Tribe

The Puyallup Tribe of the Puyallup Reservation

Snoqualmie Indian Tribe

Squaxin Island Tribe of the Squaxin Island Reservation

Suguamish Indian Tribe of the Port Madison Reservation

The Confederated Tribes and Bands of the Yakama Nation

State Agencies

Washington State Department of Archaeology and Historic Preservation

Washington State Department of Ecology

Washington State Department of Fish and Wildlife

Washington State Department of Natural Resources

Washington State Department of Social and Health Services

Washington State Department of Transportation

Washington State Parks

Washington State Patrol

Washington State Recreation and Conservation Office

Regional Agencies

Puget Sound Regional Council

Puget Sound Clean Air Agency

South King Fire and Rescue

Copies provided for Public Reference

Kent City Hall

Kent Commons Community Center

Kent Library

Federal Way City Hall

Federal Way Community Center

Federal Way Library

Federal Way 320th Library

Counties

King County

Transit Agencies

King County Metro Transit

Pierce Transit

Local Agencies

City of Des Moines

City of Federal Way

City of Kent

Utility Providers

Lumen

City of Federal Way Public Works

City of Kent Public Works

Comcast

Highline Water District

Lakehaven Water and Sewer District

MCImetro Access Transmission Services, LLC

Midway Sewer District

Puget Sound Energy

Seattle Public Utilities

Zayo Group, LLC

Appendix A3 – Glossary

Air pollutant. Smoke, dust, fumes, or odors in the ambient air that have the potential for harmful effects.

Alignment. Horizontal geometric elements, which define the location of the light rail track or roadway.

Aquatic resource. The physical elements of the aquatic environment, such as streams, rivers, lakes, and shorelands; as well as life forms such as aquatic plants and fish that live within the aquatic environment.

Aquifer. An underground layer of water-bearing permeable rock or unconsolidated materials (gravel, sand, or silt) from which groundwater can be extracted using a water well.

Arterial. A major thoroughfare used mainly for through traffic rather than access to adjacent property. Arterials generally have greater traffic-carrying capacity than collector or local streets and are designed for continuously moving traffic.

At-grade. Term used to express that a feature, such as a rail track or crosswalk, and a roadway meet at the same elevation.

Attainment area. An attainment area is an area considered to have air quality as good as or better than the national ambient air quality standards for specific pollutants as defined in the Clean Air Act.

A-weighted sound level (dBA). To approximate the way humans interpret sound, a filter circuit with frequency characteristics similar to the human hearing system is built into sound measurement equipment. Measurements with this filter enacted are referred to as A-weighted sound levels, expressed in dBA (see Decibel).

Ballast. Gravel or coarse stone used to form the bed of a railroad track or road.

Best management practices (BMPs). Approved physical, structural, and/or managerial practices that, when used singularly or in combination, prevent or reduce pollutant discharges.

Buffer. An area adjacent a critical area (e.g., wetland or stream) that functions to avoid loss or decline in ecological functions and values. In addition to preserving the ecological functions of a wetland system, a buffer physically isolates a critical area from potential disturbance and harmful intrusion, and works to minimize risk to the public from loss of life, well-being, or property damage.

Capacity, vehicle. The maximum number of vehicles that can be accommodated in a given time by a transit or highway facility.

Capital costs. Nonrecurring costs required to construct transit systems, including costs of right-of-way, facilities, rolling stock, power distribution, and the associated administrative and design costs, as well as financing charges during construction.

Carbon monoxide (CO). A colorless, odorless, tasteless gas, and one of the U.S. Environmental Protection Agency's criteria air pollutants released from automobile exhaust.

Census tract. A census tract is a small subdivision of an urban area used by the U.S. Census Bureau to identify population and housing statistics. Census blocks are subdivisions of census tracts and are the smallest unit of census geography for which the Census Bureau collects data. The boundaries of census blocks are generally streets or other notable physical features and often correspond to a city block. A census block group is a combination of census blocks, typically encompassing two to four city blocks.

The U.S. Census collects some information at the block level, some at the block group level, and some at the tract level.

Concentration (also, level). A measure of the air pollutant in the ambient air, having the units of mass per volume.

Conformity (air quality). A process that ensures federal funding and approval goes to transportation activities consistent with federal air quality goals. The Federal Highway Administration and the Federal Transit Administration jointly determine that specific regions meet air quality standards.

Construction staging area. During construction, a site temporarily used for materials or equipment storage, assembly, or other temporary, construction-related activities.

Criteria air pollutants. Those air pollutants that have been recognized by the U.S. Environmental Protection Agency as potentially harmful and for which standards have been set to protect the public health and welfare. The criteria air pollutants are carbon monoxide, sulfur dioxide, particulates, nitrogen dioxide, ozone, hydrocarbons, and lead.

Day night sound level (Ldn). Ldn is a 24-hour equivalent continuous sound level (Leq), but with a 10-dB penalty assessed to noise events occurring at night. Nighttime is defined as 10 pm to 7 am. This strongly weights Ldn toward nighttime noise because most people are more easily annoyed by noise during the nighttime hours when background noise is lower and most people are sleeping.

dBA. The sound level obtained through the use of A-weighting characteristics specified by the American National Standards Institute (ANSI) Standard S1.4-1971. The unit of measure is the decibel (dB), commonly referred to as dBA when A-weighting is used. The "A" weighting scale closely resembles human response to noise.

Decibel. The unit used to measure the loudness of noise.

De minimis. De minimis is a Latin phrase meaning something of insignificance or negligible. De minimis impacts are defined as those elements that do not adversely affect the activities, features, and attributes of a Section 4(f) resource or property.

Dewatering. The temporary removal of ground or surface water from a construction area to allow construction to be done under dry conditions.

Displacement. A property acquisition that would require removing an existing use.

Elevated mainline. A mainline that is positioned above the normal activity level (e.g., elevated structure for light rail to cross over a street).

Emission. Particulate, gaseous, noise, or electromagnetic byproducts of the transit system or vehicle.

Endangered species. According to the Endangered Species Act of 1973, an endangered species is any species in danger of extinction throughout all or a significant portion of its range, other than an insect determined by the Secretary of the Interior to constitute a pest whose protection under the provisions of this act would present an overwhelming and overriding risk to man.

Equivalent level (Leq). Leq is a measure of sound energy over a period of time. It is referred to as the equivalent sound level because it is equivalent to the level of a steady sound which, over a referenced duration and location, has the same A-weighted sound (dBA) energy as the fluctuating sound.

Forest habitat. In the Puget Sound lowlands, a habitat type generally dominated by Douglas fir, western red cedar, and western hemlock, frequently with a hardwood understory. The ground cover is generally lush. Birds and small mammals abound, and larger mammals are common in large stands.

Full acquisition. The full parcel would be acquired, and the current use would be displaced. Full acquisitions include parcels that might not be fully needed for the project but would be affected to the extent that current uses would be substantially impaired (e.g., loss of parking or access).

Glacial till. This type of soil typically consists of a diverse mix of gravelly sand with scattered cobbles and boulders in a clay/silt matrix. It is very dense and is locally referred to as "hardpan." The predominant glacial till encountered in the project area is Vashon-age glacial till.

Grade separated. Parallel or crossing lines of traffic that are vertically or horizontally physically separated from each other and do not share a common intersection.

Greenhouse gas (GHG). Greenhouse gases include carbon dioxide (CO₂), methane (CH₄), ozone (O₃), water vapor, nitrous oxide (N₂O), hydrofluorocarbons (HFCs), and perfluorocarbons. (PFCs), and sulfur hexafluoride (SF6). These gas emissions are collectively leading to the greenhouse effect, trapping the sun's solar rays and leading to an increase in Earth temperature.

Groundborne noise. Noise that is transmitted through the ground, typically reported in decibels.

Groundborne vibration. A small but rapidly fluctuating motion transmitted through the ground, typically reported as velocity or acceleration.

Habitat function. Terrestrial plant communities, wetlands, and aquatic systems such as streams provide a variety of functions in the environment. For instance, depending on the condition and location of a wetland, wetland functions might include water quality improvement, groundwater recharge, nutrient and sediment filtering, and habitat for a variety of animals, as well as education and recreation opportunities for people—the habitat function is one of several functions potentially performed by wetlands. Similarly, terrestrial and aquatic systems each also may perform many functions. When they provide habitat for animals, they are said to be performing or providing a "habitat function."

Habitat value. The value of a plant community's function as determined by the habitat's ability to support the needs of biological species. High-value habitats are those that support or may support threatened, endangered, and/or sensitive species as determined by federal, state, and local jurisdictions.

Hazardous materials. Hazardous materials are materials, which, because of their chemical, physical, or biological nature, pose a potential risk to life, health, or property when released. Such materials include hazardous waste, dangerous waste, hazardous substances, and toxic substances

Headway. The headway between vehicles in public transit systems is the amount of time (usually in minutes) that elapses between two vehicles passing the same point traveling in the same direction on a given route.

High-capacity transit. A system of public transportation services within an urbanized region operating principally on exclusive rights-of-way; examples include light rail transit or express buses on exclusive bus ways and their supporting services.

Hours of service. The number of hours during the day between the start and end of service on a transit route, also known as the service span.

Lead Track. A track connecting a railroad yard or facility with a mainline track.

Ldn. The day/night average noise level.

Leq. The equivalent steady-state sound level that, in a specified time period, would contain the same acoustic energy as the varying sound level during the same period; considers volume capacity, travel speeds, and delay.

Leq(h). The hourly value of Leq.

Level of service (LOS). A qualitative measure that represents the collective factors of travel under a particular volume condition. A measure of traffic congestion.

Light rail transit (also light rail). A mode of mass transportation comprising light rail vehicles, which travel on steel tracks and are powered by electricity from overhead wires. This mode is characterized by its ability to operate in at-grade and/or grade-separated environments.

Link. Sound Transit's light rail system.

Low income. A person whose median household income is at or below the U.S. Department of Health and Human Services poverty guidelines.

Low income population. Any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by the project.

Mainline. Track that is used for LRVs or is the principal artery of a system to which other components (such as operation and maintenance facilities) are connected (see Elevated Mainline).

Maintenance area. Maintenance areas are geographic areas with a history of nonattainment of National Ambient Air Quality Standards (NAAQS) but which now consistently meet NAAQS.

Megawatt (MW). 1,000,000 watts.

Minority. A person who is:

- Black A person having origins in any of the black racial groups of Africa;
- Hispanic or Latino A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race;
- Asian A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent;
- American Indian or Alaskan Native A person having origins in any of the original people of North or South America, including Central America, and who maintains cultural identification through tribal affiliation or community recognition; or
- Native Hawaiian or Other Pacific Islander A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

Minority population. Any readily identifiable groups of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by the project.

Mobility. The ease of continuous movement along the transportation system.

Mode. A particular form or method of travel, such as pedestrian, bicycle, automobile, bus, or light rail.

Model Toxics Control Act (MTCA). The Model Toxics Control Act Cleanup Regulation, WAC 173-340, implements the Model Toxics Control Act, RCW 70.105D, which addresses strict requirements for site discovery and reporting, site assessments, and site remediation. Most important, the regulation defines standard methods used to assess whether a site is contaminated or clean.

National Ambient Air Quality Standards (NAAQS). Federal limits on levels of atmospheric contamination necessary to protect the public from adverse effects on health (primary standards) and welfare (secondary standards).

National Historic Preservation Act of 1966 (NHRA). The Act that established the National Register of Historic Places and State Historic Preservation program and set forth guidelines and regulations for environmental review of projects involving federal funding.

National Register of Historic Places (NRHP). The official list of the nation's cultural resources determined to be worthy of preservation; the register is maintained by the National Park Service.

Network. A system of real or hypothetical interconnecting links that forms the configuration of transit routes and stops comprising the total system.

Nonattainment area. An area designated by the U.S. Environmental Protection Agency as currently violating the National Ambient Air Quality Standards, based on archival air quality data.

NO_X. Oxides of nitrogen (nitrogen oxide and nitrogen dioxide). The pollutants released during high-temperature combustion of fossil fuels such as diesel.

Off-peak. Those periods of the day when demand for transit service is not at a maximum.

Operating costs. Recurring costs incurred in operating transit systems, including wages and salaries, maintenance of facilities and equipment, fuel, supplies, employee benefits, insurance, taxes, and other administrative costs. Amortization of facilities and equipment is not included.

Ozone. A gas consisting of three oxygen atoms formed in reactions of nonmethane hydrocarbons and nitrogen oxides in the presence of sunlight. Ozone is one of the U.S. Environmental Protection Agency's criteria air pollutants.

Partial acquisition. Part of a parcel would be acquired, but the current use generally would not be displaced. In some instances, such as larger parcels that hold multiple uses, a business or residential unit on a parcel could be displaced, but most uses would remain.

Particulate matter. A mixture of extremely small particles and liquid droplets that is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. U.S. Environmental Protection Agency is concerned about particles that are 10 micrometers in diameter or smaller because those are the particles that generally pass through the throat and nose and enter the lungs.

Peak hour. The hour of the day in which the maximum demand for service is experienced, accommodating the largest number of automobile or transit patrons.

Peak period. A time period or periods when travel activity is at its heaviest.

Pollution-Generating Impervious Surface (PGIS). Impervious surfaces considered to be a significant source of pollutants in stormwater runoff. Such surfaces include those subject to vehicular use, industrial activities (as defined in Washington State Department of Ecology's Stormwater Management Manual), or storage of erodible or leachable materials, wastes, or chemicals, and which receive direct rainfall or the run-on or blow-in of rainfall.

Preferred alternative. Following publication of the Draft EIS, the Sound Transit Board identifies a preferred alternative, including route and station options. The Final EIS will further evaluate the preferred alternative as well as other alternatives. A preferred alternative is not an action or decision within the meaning of WAC 197-11-070.

Recessional outwash. Sediment deposited by meltwater streams flowing away from a retreating glacier during the last episode of glaciation.

Reliability. How often transit service is provided as promised; affects waiting time, consistency of passenger arrivals from day to day, total trip time, and loading levels.

Right-of-way. The corridor (horizontal and vertical space) owned by the transit agency for the transportation way.

Riparian habitat. A habitat type associated with stream or river margins and characterized by dense vegetation consisting primarily of willow, alder, and cottonwood species, supporting a wide variety of waterfowl, songbirds, amphibians, and small mammals.

Runoff. The rainwater that directly leaves an area in surface drainage, as opposed to the amount that seeps out as groundwater.

Section 106. Section 106 of the National Historic Preservation Act of 1966 established a procedure to review the potential effects on cultural resources by projects that involve a federal action.

Section 4(f). Section 4(f) of the U.S. Department of Transportation Act restricts the United States Department of Transportation's approval of projects affecting the following properties: publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge, or any land from a significant historic site.

Section 401. Section 401 of the Clean Water Act is a certification program administered by the Washington Department of Ecology under guidelines of the U.S. Environmental Protection Agency to ensure projects applying for a Section 404 permit comply with state water quality standards and other requirements of the state law.

Section 404. Section 404 of the Clean Water Act is a permit program administered by the U.S. Army Corps of Engineers under guidelines by the U.S. Environmental Protection Agency to protect the nation's waters from dredged and fill sources.

Section 6(f). Section 6(f) of the Land and Water Conservation Act of 1965 established restrictions on, and replacement requirements for, the use of land acquired with funds authorized under the Land and Water Conservation Fund Act.

Sensitive receptor (Auditory). A local area or site that supports activities easily disrupted by audio intrusions or distractions, such as a school, historic landmark, or residential neighborhood.

Sensitive view. A view that is identified by local jurisdictions as requiring protection.

Social interaction. Intra-neighborhood communication and circulation using street, sidewalk, and bikeway connections between residential areas and community facilities, retail businesses, and employment centers. Also includes verbal interaction and telecommunications facilities.

Sound Transit 2 (ST 2). A package of high-capacity transit investments in the regional transit system, adopted by the Sound Transit Board in July 2008, which included light rail as the mode choice for the project corridor. ST 2 includes a major expansion of the Link light rail system. ST 2 would extend light rail from North Seattle into Snohomish County, across Lake Washington into East King County, and south of SeaTac International Airport to Federal Way.

Sound Transit 3 (ST 3). Sound Transit 3, for which financing was approved by voters in 2016, includes the expansion of bus, bus rapid transit, commuter rail, and light rail service throughout the region. Under Sound Transit 3, the light rail system in central Puget Sound would grow to 116 miles with over 80 stations. Light rail would expand north to Everett, south to Federal Way and Tacoma, east to Redmond, south Kirkland, and Issaquah, and west to West Seattle and Ballard.

Staging area. Section of land near a construction site designated for equipment and truck storage, maintenance, and warm-up prior to engagement in construction activities.

Stormwater. Stormwater is rain and snow melt that runs off surfaces such as rooftops, paved streets, highways, and parking lots. As water runs off these surfaces, it can pick up pollution.

Stormwater detention. The temporary storage of stormwater runoff and subsequent release at a slower rate.

Stormwater treatment. Stormwater ponds and underground vaults are used to remove sediments and dissolved metals from stormwater. They collect sediments on the bottom of the pond or vault, where maintenance workers can clean them out on a regular basis.

Subduction zone. An area where one crustal plate is descending below another. The Puget Sound area is close to a subduction zone, which is formed by the Juan de Fuca plate descending below the North American plate. This action can cause significant seismic activity.

Threatened species. According to the Endangered Species Act of 1973, any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Till. A poorly sorted, gravel-like deposit of sediment that is left behind by a glacier, which does not show stratification. Till is sometimes called boulder clay because it is composed of clay, boulders of intermediate sizes, or a mixture of these.

Transit. A transportation system principally for moving people in an urban area and made available to the public usually through paying a fare.

Transit center. A station with shelters where a large number of transit vehicles and passengers can be brought together with safety and convenience.

Transit-oriented development. The Transportation Research Board provides several definitions of transit-oriented development that emphasize high-quality walking environments, mixed land uses, and high-density developments linked to transit. Generally, transit agencies agree that what constitutes a transit-oriented development is a pattern of dense, diverse, pedestrian-friendly land uses near transit nodes that, under the right conditions, translates into higher transit patronage.

Travel time (in vehicle). The time required to travel between two points, not including terminal or waiting time.

Trip. The one-way movement of one person between the origin and the destination, including transfers, and the walk distance to and from the means of transportation.

Unity. In visual analysis, the visual coherence and compositional harmony of the landscape.

Use of Section 4(f) land. According to regulations of the U.S. Department of Transportation, use of Section 4(f) land is defined as: (1) acquisition of title or easement to land, or (2) in unusual circumstances, serious indirect impacts, such as increase in noise, visual intrusion, or access obstruction.

Vehicle hours of travel (VHT). The total vehicle hours expended traveling on the roadway network in a specified area during a specified time period.

Vibration velocity. Vibration velocity is the basic measure of groundborne vibration. It is a measure of the rate at which particles in the ground are oscillating relative to the equilibrium point.

Vibration velocity level. It is generally accepted that, over the frequency range important for groundborne vibration from transit systems, human response to vibration is best correlated to the root mean square (rms) vibration velocity.

Viewer sensitivity. The extent of the viewer's concern for a particular view or viewshed. Viewer sensitivity to the viewed environment is classified as low, average, or high.

View. A scene observed from a given vantage point.

Viewshed. An area of land, water, or other environmental element that is visible to the human eye from a fixed vantage point.

Visual character. Refers to identifiable visual information, including visual elements and major environmental features.

Visual quality. Refers to the evaluation of the visual experience to the public and is described in terms of vividness, intactness, and unity. *Vividness* refers to the way landscape components combine in distinctive and memorable visual patterns. *Intactness* refers to whether the natural and human-built visual patterns form a consistent landscape, or whether highly contrasting features intrude into the view. *Unity* refers to the visual coherence and compositional harmony of the landscape considered as a whole. Visual quality is an assessment of the visual character and is categorized as low, medium, or high, as follows:

Low visual quality. Views that lack a dominant visual character in which there is a low level of fit between disparate elements. In some cases, these views appear disorganized with features that seem out of place, or are views with some compositional harmony but include eyesore elements that can dominate one's perception.

Medium visual quality. Views with a unity or compositional harmony between elements of the landscape that produce a pleasing overall impression in which encroaching elements are minor and do not substantially alter the perception of the landscape as a unit. These views lack vivid, memorable features and are generally characterized as common or ordinary.

High visual quality. Views with vivid, memorable, distinctive features in a landscape with compositional harmony or that fit between elements of the landscape that is free from encroaching elements.

Washington State Department of Ecology 303(d) List. The federal Clean Water Act (CWA), adopted in 1972, requires states to restore their waters to be "fishable and swimmable." The CWA established a process to identify and clean up polluted waters. Every 2 years, all states are required to prepare a list of water bodies that do not meet water quality standards. This list is called the 303(d) list because the process is described in Section 303(d) of the CWA.

Appendix A4 - References

Fact Sheet

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