

South Sub-Area Workshop #2 Data Table

4/24/2014

The table below is organized by evaluation factor and includes the data requested in South Sub-Area Workshop #1. Please reference the table below while you use the Segment Scoring Sheet to score the route segments in the south sub-area. Data is organized by evaluation factor.

Glossary:

- Near: Within 600 feet of a corridor
- Adjacent: Within 25 feet of a corridor
- DNR: Washington Department of Natural Resources
- LiDAR: Short for “Light Detection and Ranging,” is a [remote sensing](#) method that uses light in the form of a pulsed laser to measure ranges.
- DBH: Diameter at breast height, or a method of measuring the diameter of a standing tree.

If you do not see data you requested, please review the Response to Data Requests document for an explanation.

Segment data table

Data	Description	Unit	Segment K1 <i>0.57 miles</i>	Segment K2 <i>0.88 miles</i>	Segment L <i>6.95 miles</i>	Segment M <i>5.33 miles</i>	Segment N <i>1.23 miles</i>
Evaluation factor one - Least proximity to sensitive community land uses							
Churches - Near	Religious Service Institution use within 600 feet of a corridor (based on King County assessor data and Google Earth).	Count of Parcels	1	1	1	5	0
	Religious Service Institution use within 600 feet of a corridor (based on King County assessor data and Google Earth).	Count/Mile	1.8	1.1	0.1	0.9	0.0
Schools - Near	School use within 600 feet of a corridor (based on King County assessor data and Google Earth).	Count of Parcels	1	1	0	3	0
Schools - Near	School use within 600 feet of a corridor (based on King County assessor data and Google Earth).	Count/Mile	1.8	1.1	0.0	0.6	0.0

Data	Description	Unit	Segment K1 0.57 miles	Segment K2 0.88 miles	Segment L 6.95 miles	Segment M 5.33 miles	Segment N 1.23 miles
Schools - Adjacent	School use within 25 feet of a corridor (based on King County assessor data and Google Earth).	Count of Parcels	1	0	0	2	0
	School use within 25 feet of a corridor (based on King County assessor data and Google Earth).	Count/Mile	1.8	0.0	0.0	0.4	0.0
Students - Near	Number of students attending within 600 feet of a corridor (based on King County assessor data and Google Earth). <i>*Some attendance data not readily available.</i>	Count	1633	1633	0	11254*	0
Child Care - Adjacent	Child Care Facilities within 25 feet of a corridor (based on King County assessor data and Google Earth).	Count of Parcels	0	0	0	0	0
	Child Care Facilities within 25 feet of a corridor (based on King County assessor data and Google Earth).	Count/Mile	0.0	0.0	0.0	0.0	0.0
Recreation - Adjacent	Recreational use within 25 feet of a corridor (based on King County assessor data).	Count of Parcels	2	2	7	1	1
	Recreational use within 25 feet of a corridor (based on King County assessor data).	Count/Mile	3.5	2.3	1.0	0.2	0.8
Parks - Adjacent	Park use within 25 feet of a corridor (based on King County assessor data).	Count of Parcels	2	1	4	5	1
	Park use within 25 feet of a corridor (based on King County assessor data).	Count/Mile	3.5	1.1	0.6	0.9	0.8
Trails - Near	Length of trails within 600 feet of a corridor (based on King County Trails File).	Miles	0.6	0.8	6.6	0.3	0.4
	Count of trails within 600 feet of a corridor (based on King County Trails File).	Count	1	1	3	1	2
Trails - Adjacent	Length of trails within 25 feet of a corridor (based on King County Trails File).	Miles	0.08	0.01	1.92	0.00	0.04
	Count of trails within 25 feet of a corridor (based on King County Trails File).	Count	1	1	2	0	1
Registered Historic Sites	Registered Historic Sites within half mile of segments.	Count	0	0	0	3	2

Data	Description	Unit	Segment	Segment	Segment	Segment	Segment
			K1	K2	L	M	N
			0.57 miles	0.88 miles	6.95 miles	5.33 miles	1.23 miles
Evaluation factor two - Least proximity to sensitive environmental areas							
Wildlife	Number of State Documented wildlife species presence per state Priority Habitat and Species Data. Includes known salmonid species present.	Species Count	0	1	9	9	6
Wetlands	Wetlands identified within 50 feet on both sides of segment centerline (either from GIS data or field reconnaissance). This information is based on visual observations and does not include delineations.	Count	3	6	21	4	0
	Wetlands identified within 50 feet on both sides of segment centerline (either from GIS data or field reconnaissance). This information is based on visual observations and does not include delineations.	Count/Mile	5.3	6.8	3.0	0.8	0.0
Stream Crossings	Stream data within 50 feet both sides of segment centerline (based on GIS layers and field reconnaissance).	Count	1	8	20	2	3
	Stream data within 50 feet both sides of segment centerline (based on GIS layers and field reconnaissance).	Count/Mile	1.8	9.1	2.9	0.4	2.4
High Slope Instability - Adjacent	High instability within 25 feet of the right-of-way (based on WA DNR Slope Stability Rating Area).	Percent of Segment	2.6	9.3	8.4	4.9	6.9
Medium Slope Instability - Adjacent	Medium instability within 25 feet of the right-of-way (based on WA DNR Slope Stability Rating Area).	Percent of Segment	3.0	9.0	9.2	5.4	4.1
Low Slope Instability - Adjacent	Low instability within 25 feet of the right-of-way (based on WA DNR Slope Stability Rating Area).	Percent of Segment	0.3	3.1	4.2	3.9	1.6
Moderately Steep Slopes - Adjacent	Slopes greater than 20% and less than 40% within 25 feet of the right-of-way (derived from King County LiDAR elevation).	Percent of Segment	18.3	12.9	24.8	19.6	16.6
Steep Slopes - Adjacent	Slopes greater than 40% within 25 feet of the right-of-way (derived from King County LiDAR elevation).	Percent of Segment	18.0	24.9	21.1	7.9	19.2

Data	Description	Unit	Segment K1 0.57 miles	Segment K2 0.88 miles	Segment L 6.95 miles	Segment M 5.33 miles	Segment N 1.23 miles
Faults - Adjacent	Number of faults that are within 25 feet of a corridor (derived from WA DNR fault data set).	Count	0	0	3	3	0
	Number of faults that are within 25 feet of a corridor (derived from WA DNR fault data set).	Count/Mile	0.0	0.0	0.4	0.6	0.0
Evaluation factor three - Least proximity to residential areas							
Residential Parcels - Adjacent	Residential use within 25 feet of a corridor (based on King County assessor data).	Count of Parcels	11	20	259	272	7
	Residential use within 25 feet of a corridor (based on King County assessor data).	Count/Mile	19.3	22.7	37.3	51.0	5.7
Residential Parcels - Near	Residential use within 600 feet of a corridor (based on King County assessor data).	Count of Parcels	102	165	1357	1830	205
	Residential use within 600 feet of a corridor (based on King County assessor data).	Count/Mile	178.9	187.5	195.3	343.3	166.7
Residential Tax Accounts - Adjacent	Residential tax payers within 25 feet of a corridor (based on King County assessor data).	Count of Tax Payers	40	20	584	316	202
	Residential tax payers within 25 feet of a corridor (based on King County assessor data).	Count/Mile	70.2	22.7	84.0	59.3	164.2
Residential Parcels with No Existing Transmission Infrastructure - Adjacent	Residential use within 25 feet of a corridor without existing transmission lines (based on King County assessor data).	Count of Parcels	0	0	125	4	0
	Residential use within 25 feet of a corridor without existing transmission lines (based on King County assessor data).	Count/Mile	0.0	0.0	18.0	0.8	0.0
Residential Parcels with No Existing Transmission Infrastructure - Near	Residential use within 600 feet of a corridor without existing transmission lines (based on King County assessor data).	Count of Parcels	0	0	208	0	0
	Residential use within 600 feet of a corridor without existing transmission lines (based on King County assessor data).	Count/Mile	0.0	0.0	29.9	0.0	0.0

Data	Description	Unit	Segment K1 0.57 miles	Segment K2 0.88 miles	Segment L 6.95 miles	Segment M 5.33 miles	Segment N 1.23 miles
Evaluation factor four - Most protective of health and safety							
Fuel Pipeline Present	Liquid fuel pipelines present with existing high voltage transmission lines.	Presence	No	Yes	No	Yes	No
Polychlorinated Biphenyl (PCB) Levels	None of the equipment proposed along any segment or as part of substation improvements will contain PCBs.	Additional PCBs	0	0	0	0	0
EMF from New Line	EMF levels are design and operationally dependent; however, all levels will be below published World Health Organization (W.H.O.) and Institute of Electrical and Electronics Engineers (IEEE) recommended exposure levels.	Below Recommended W.H.O. and IEEE Levels	Yes	Yes	Yes	Yes	Yes
Evaluation factor five - Least proximity to mature vegetation							
Tree Removal	Total number of trees greater than 4-inch dbh throughout entire segment. The following methods were used to develop the tree estimates: LiDAR, Google Earth, and/or field reconnaissance.	Tree Total >4-inch (dbh)	356	953	3,615	1,725	628
Tree Removal	Total number of trees greater than 4-inch (dbh) requiring work throughout entire segment. The following methods were used to develop the tree estimates: LiDAR, Google Earth, and/or field reconnaissance.	Trees >4-inch (dbh) per mile	625	1083	520	324	511

Other relevant data

Some requests were made that did not directly relate to evaluation factors and that information is captured in the table below.

Data Name	Data Description	Data Unit	Segment K1 0.57 miles	Segment K2 0.88 miles	Segment L 6.95 miles	Segment M 5.33 miles	Segment N 1.23 miles
Businesses - Near	Industrial, Medical, Retail/Business use within 600 feet of a corridor (based on King County assessor data).	Count	0	0	18	31	0
	Industrial, Medical, Retail/Business use within 600 feet of a corridor (based on King County assessor data).	Count/Mile	0.0	0.0	2.6	5.8	0.0
Road Access for Construction	Access from roads using typical bucket truck equipment (based on King County parcels and ArcGIS Basemap imagery).	Miles	0.5	0.9	4.5	1.2	0.03
	Access from roads using typical bucket truck equipment (based on King County parcels and ArcGIS Basemap imagery).	Percent	86	100	65	22	2
Construction Cost Estimate	Percent difference from average cost estimate including construction, vegetation removal and restoration.	Percent	31	-11	-28	-18	-3
Electric System Longevity	Electric System Longevity: Estimated year when the next 230 kV line for a second Eastside transformer is needed. Depends on the complete route, not just an individual segment. *Requires the entire route built to accommodate two 230 kV lines.	Year	2034-2038	2034-2038	2034-2038	2038-2060*	2038-2060*
Industrial Area - Near	Industrial use within 600 feet of a corridor based on King County assessor data.	Count	0	0	12	4	0
	Industrial use within 600 feet of a corridor based on King County assessor data.	Count/mile	0.0	0.0	1.7	0.8	0.0
Industrial Area - Adjacent	Industrial use within 25 feet of a corridor based on King County assessor data.	Count	0	0	1	0	0
	Industrial use within 25 feet of a corridor based on King County assessor data.	Count/Mile	0.0	0.0	0.1	0.0	0.0

Data Name	Data Description	Data Unit	Segment K1 0.57 miles	Segment K2 0.88 miles	Segment L 6.95 miles	Segment M 5.33 miles	Segment N 1.23 miles
Proposed Substation 115kV Improvements	See Map showing additional 115kV improvements needed for the Westminster or Vernell substation sites.	See Map	See Map	See Map	See Map	See Map	See Map
Type of right-of-way	Cross-country transmission corridor length.	Miles	0.00	0.00	1.80	5.33	1.23
	Cross-country transmission corridor length.	Percent	0	0	26	100	100
	Corridor length on public road right-of-way.	Miles	0.56	0.88	0.26	0.35	0.03
	Corridor length on public road right-of-way.	Percent	98	100	4	7	2
	Corridor length along Eastside Rail Corridor or railroad right-of-way.	Miles	0.0	0.0	5.0	0.0	0.02
	Corridor length along Eastside Rail Corridor or railroad right-of-way.	Percent	0	0	72	0	2
Existing Transmission Infrastructure	Miles of existing Overhead Transmission Infrastructure. See Map.	Miles	0.56	0.88	2.49	5.33	1.23
	Miles of existing Overhead Transmission Infrastructure. See Map.	Percent	98	100	36	100	100
	Miles of Railroad right-of-way with adjacent existing Overhead Transmission Infrastructure. See Map.	Miles	0.0	0.0	2.5	0.0	0.0
	Miles of Railroad right-of-way with adjacent existing Overhead Transmission Infrastructure. See Map.	Percent	0	0	36	0	0