Draft Snohomish Landscape Connectivity Metadata Author: Cramer Fish Sciences, Jan 2025

Draft automation script uses as input a shapefile with fields fid, lngth\_m, width\_m and produces a shapefile with the following fields:

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| **Field** | **Data type** | **Units** | **Description** |
| fid | Numeric | NA | Unique segment identifier |
| Descrip | String | NA | Notes |
| i | Numeric | NA | Segment starting (upstream) vertex ID, assigned using igraph package in R. |
| j | Numeric | NA | Segment ending (downstream) vertex ID, assigned using igraph package in R. |
| lngth\_m | Numeric | meters | Segment length calculated using GIS. |
| upstrm\_w | Numeric | meters | Width of the segment upstream of this segment estimated at a location that is visually representative of the full segment width from NAIP imagery (source: <https://gis.apfo.usda.gov/arcgis/rest/services/NAIP/USDA_CONUS_PRIME/ImageServer>). This field was used as an interim field for bifurcation calculation. |
| PCT\_val | Numeric | percent | 100\*(Width of current segment divided by the width of the upstream segment). This field was used as an interim field for bifurcation calculation. |
| upstrm\_f | Numeric | NA | fid of the segment upstream of this segment. This field was used as an interim field for bifurcation calculation. |
| confluence | String | NA | A binary value of either “No confluence” or “Confluence” describing whether the segment is a result of a confluence point (at vertex i). This field was used as an interim field for bifurcation calculation. |
| width\_m | Numeric | meters | Segment width estimated at a location that is visually representative of the full segment width from NAIP imagery (source: <https://gis.apfo.usda.gov/arcgis/rest/services/NAIP/USDA_CONUS_PRIME/ImageServer>) |
| Min\_Dist | Numeric | meters | Preliminary output of the draft landscape automation script. The shortest spatial-distance between the downstream vertex of a segment (vertex i) and the starting vertex of the river network. |
| n\_paths | Numeric | NA | Preliminary output of the draft landscape automation script. Total number of paths from the segment’s starting vertex (vertex i) to the starting vertex of the river network. |
| bi\_order | Numeric | NA | Preliminary output of the draft landscape automation script. Calculated using bifurcation rules defined in Learning Plan 22-1764: Ross & Hall, Automating Landscape Connectivity for River Deltas and Pocket Estuaries Across Puget Sound, Washington State Restoration and Conservation Office and Estuary and Salmon Restoration Program. |