

Appendix J

Project Area Cut Sheets

The restoration opportunities identified in these cut sheets represent the most effective restoration actions, based on current scientific data, to restore the geomorphic and ecological processes to the Tucannon River and floodplain to the highest extent possible. There are other interests and needs in the basin that represent constraints on the opportunities identified, but documents, such as the Wooten Wildlife Floodplain Management Plan (WDFW 2014), exist to express additional goals and interests. Therefore, this assessment does not make a specific attempt to identify those outside interests or the constraints they may have on restoration actions. Any restoration project that is pursued further will need to consider the constraints of individual interests in the basin and factor them in through collaboration and discussion with stakeholders. When projects move from the conceptual ideas of this assessment to project implementation in the future, the general public, in addition to those stakeholders and landowners directly involved, can also participate in the decision-making discussions. Interested parties should contact the Conservation District or one of the other restoration partners.

Individual evaluation cut sheets for each project area are separated into treated and untreated categories, which are further categorized into three tiers for prioritization, and listed from upstream to downstream within each tier. Appendix J.1 contains all the treated project areas and Appendix J.2 contains all the untreated project areas. Table J-1 provides the project area, river mile, and valley mile of several well-known landmarks throughout the valley for reference. Each of the categories and tiers provides slightly different information, but all follow the same general format. The first section of each cut sheet provides a general description of the project area and field observations noted during the Anchor QEA field staff site visit for those sites that were walked for this assessment. If the site was not visited as part of this assessment, the description was drawn from the 2011 assessment and modified to fit the updated project area boundaries. Photographs follow the same guideline with an updated photograph if the site was walked in 2018 and a photograph drawn from the 2011 assessment if the site was not visited as part of this assessment.

Table J-1
Reference Landmarks

Landmark	Project Area	River Mile	Valley Mile
Powers Road Bridge	45/44	2.0	2.5
Kellogg Hollow Bridge	39.2	4.9	4.0
Smith Hollow Bridge	37	8.3	7.2
Pataha Creek	34.1	12.5	10.8
Highway 12 Bridge	32.2/33	14.6	12.8
Enrich Road	29/30	18.6	16.4
King Grade	27/28.1	23	20.2
Turner Road (Marengo)	25/26	27	23.9
Hartstock Grade	18.1	33.7	29.9
Tumalum Creek	16	35.75	31.7
Spring Lake	14.3	37.8	33.5
Tucannon Hatchery	13/14.1	39.3	34.8
Beaver-Watson Lakes	11.1	42.2	37.3
Curl Lake	8	44.8	39.7
Camp Wooten Entrance	5/6	46.1	40.8
Little Tucannon Confluence	3.1/3.2	48.2	42.7

The second section provides the geomorphic change evaluation, which is based on the analysis of the difference between the 2010 and 2017 LiDAR data sets, highlighting locations of material aggradation and erosion. As discussed in further detail in Appendix D, the 2010 LiDAR does not register bathymetry and instead shows the water surface elevation as the channel bottom, which may cause some over or under-estimation of aggradation and erosion. Geomorphic change trends are discussed in general in the Appendix D, and these trends are identified in the geomorphic change evaluation for each project area cut sheet. These narratives refer often to the GIS layers in the “Change Analysis” layer group and locations are highlighted for discussion in the “Narrative Highlights” layer. For the treated project areas, this section also includes a brief description of the restoration project performed on the reach, and further evaluates whether the geomorphic changes seen in the project area are the result of those restoration actions.

The final section included on the cut sheets provides a discussion of the individual geomorphic analysis results, the resulting prioritization metrics, and an interpretation of what these metrics indicate about the geomorphic processes occurring in the project area. Based on these interpretations, as well as the GIS data, restoration strategies and basic methods for implementing them are recommended. These restoration strategies are described in Section 7 of this report.

Several graphics aid in the interpretation and display of the geomorphic analysis results and metrics, as well as how the final tiers were decided for each project area.

Figure J-1 shows an example of the Analysis Results Summary figure provided for each project area. The information in this figure is referenced within the narrative and provides an easy way to view all the analysis results that play into the prioritization metrics, as well as Total Floodplain Potential, Existing Floodplain Potential, and Pool Frequency. Complexity analysis results are all located in the upper left of the figure and Floodplain Connectivity metrics are all located at the bottom of the figure. It should be noted that this figure displays the project area’s rank among all the other project areas for each analysis result, and not the actual value of the analysis result. As such, the lower the ranking for an individual analysis result, the closer the line will be to the center of the chart, which is the 60th and last ranked project area. The higher the ranking for an individual analysis result, the closer the line will be to the outside of the chart. For example, if the pool frequency value is at the 10 line, this indicates that the project area ranks 10th among project areas for pool frequency and not that the project area has 10 pools per valley mile. Additionally, the median rank is highlighted on the chart; a rank outside of this line indicates that the project area is better than the median in that analysis result, and a rank inside of this line indicates that the project area is worse than the median in that analysis result.

Figure J-1
Example of Analysis Results Summary Figure for Project Area 1.1

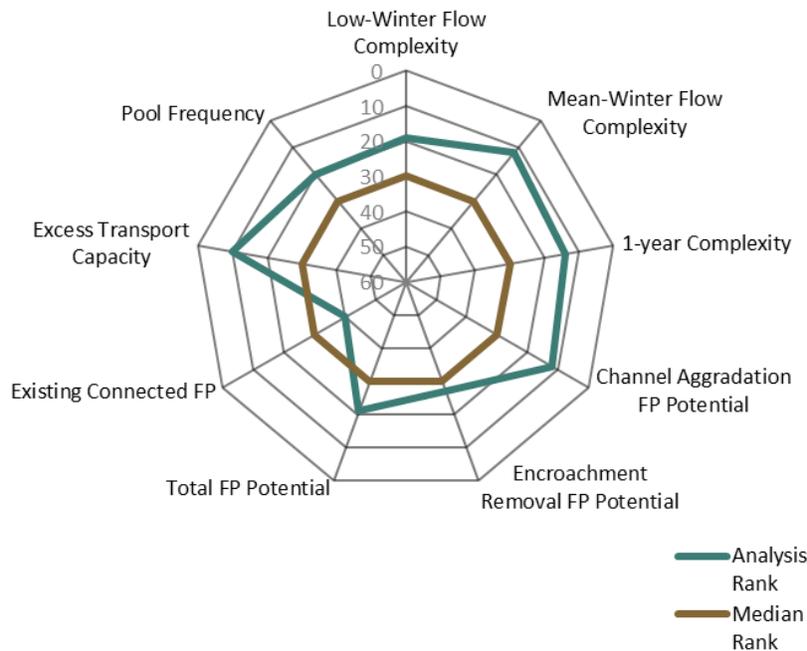
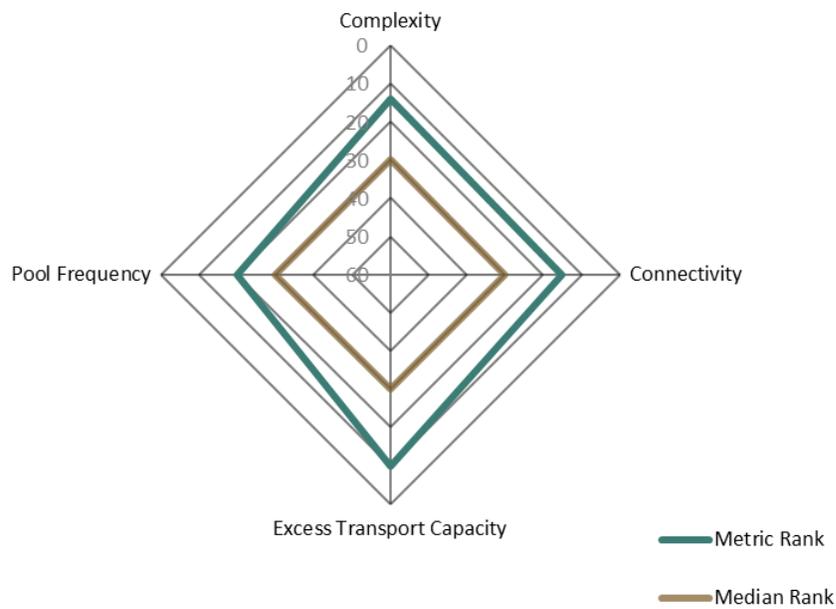


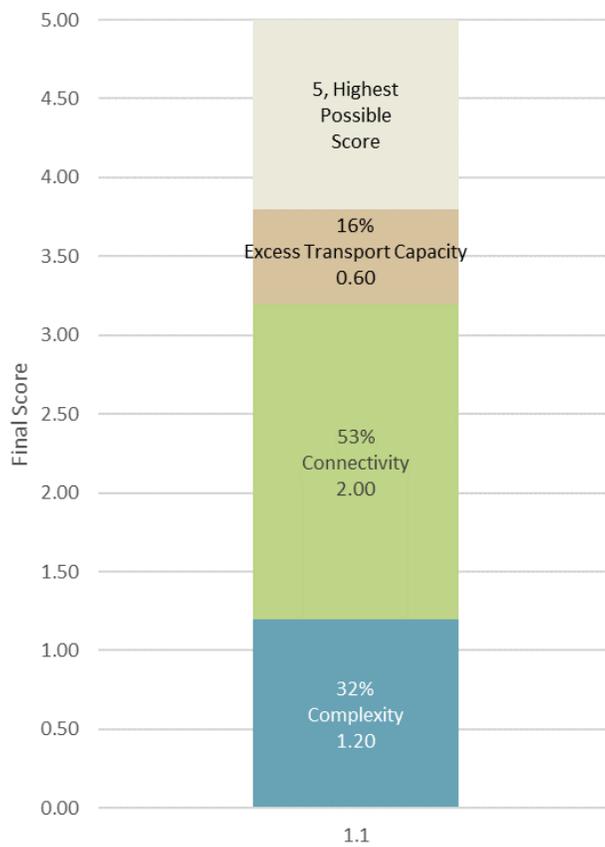
Figure J-2 shows an example of the Prioritization Scoring Summary figure provided for each project area. This figure shows the relative rank of the project area in the prioritization metrics as they have been calculated from the analysis results using the method described in Section 11.1. In addition to the three prioritization metrics, this figure includes pool frequency because it is uniquely integral to the goals and objectives for the basin. Just as in the Analysis Results Summary figure, the median rank is highlighted to show whether a project performs above or below the median for a given metric.

Figure J-2
Example of Prioritization Scoring Summary Figure for Project Area 1.1



Finally, Figure J-3 shows an example of the Score Breakdown figure provided for each project area. This figure shows how each of the three prioritization metrics is contributing to the project area’s final score, with 5 being the highest score. The percentages listed described how much of an influence an individual metric has on the total score for the project area. The number listed is the score of the project area, weighted by the metric weighting coefficients described in Section 11.1 (40% for Complexity and Connectivity, 20% for Excess Transport Capacity). This chart can be used to quickly identify which prioritization metrics play the largest role in prioritizing restoration on a project area.

Figure J-3
Example of Score Breakdown Figure for Project Area 1.1



Reference

WDFW (Washington Department of Fish and Wildlife), 2014. *W.T. Wooten Floodplain Management Plan*. Authored by the Wooten Floodplain Management Plan Team. November 8, 2012; Update December 2014.