

JOCKO RIVER FLOODPLAIN RESTORATION PLANNING USING SUITABILITY ANALYSIS^{AFS}

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The Confederated Salish and Kootenai Tribes are restoring the Jocko River watershed, located on the Flathead Indian Reservation in western Montana. Restoration efforts focused on restoring (1) the watershed for bull trout, and (2) ecological processes impacted along the river corridor. To support these efforts, we identified areas with high potential for restoring native riparian and wetland plant communities along the lower main-stem Jocko River floodplain using a suitability analysis approach. This analysis used a GIS system to combine variables (layers) according to a set of decision rules to ultimately determine restoration categories for revegetation potential along the river. Four main geographic variables were used to determine suitability classes for native plant community restoration: soil texture in the surface layer; hydric soil status, presence of woody vegetation in 1937 and HGM (hydrogeomorphic) cover type. These variables were selected as the best available information for predicting restoration potential across the entire ecological floodplain area. Fine-resolution topographic data will be used as it becomes available, to refine the analysis to include elevation classes relative to known hydrologic features. Based on this analysis, three combinations of variables (suitability classes) were identified that indicate high restoration potential for restoring native plant communities along the Jocko River. This type of analysis

is a useful tool that should be incorporated into watershed restoration planning to increase the success of restoration efforts of rivers, floodplain, wetlands and ultimately native fisheries.