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**Presentation Title: Using Genetics to Investigate the Spawning and Rearing Distribution of Summer and Winter Steelhead in the North Umpqua Basin**

Abstract for the 2018 Pacific Coast Steelhead Management Meeting

The North Umpqua River is famous for its unique run of summer steelhead. Summer steelhead are present in far fewer rivers and typically have much smaller population sizes than winter steelhead. This is consistent with the steelhead in the North Umpqua Basin, where the summer population averages approximately one sixth the size of the winter population and is of greater conservation concern. Despite the importance and conservation concerns of North Umpqua summer stealhead, little is known about the locations they use for spawning and rearing. We collected juvenile steelhead tissue samples from many sites throughout the North Umpqua Basin and use recently developed genetic markers in the GREB1L region to distinguish their run timing. We found strong partitioning of summer and winter individuals within the basin, where different tributaries were preferentially utilized by a single run. Understanding which locations are important for the spawning and rearing of summer steelhead provides useful information for management and conservation to secure the long term persistence of this unique population.