**Klungle, Matthew M – Washington Department of Fish and Wildlife**

**Presentation Title: Assessing Environmental Factor That May Influence Life History Fiversity and Growth of Puget Sound Steelhead Smolts.**

**Abstract for the 2018 Pacific Coast Steelhead Management Meeting**

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Steelhead smolts typically have a more diverse life history in their freshwater phase than other Pacific salmonids and this diversity is expressed regionally among populations within the species. For example, the Nisqually River in South Puget Sound produces steelhead smolts that are larger on average than other Puget Sound smolts. Furthermore, steelhead smolts outmigrating from the Green River in Central Puget Sound and Nisqually River tend to be younger than conspecifics in North Puget Sound, suggesting that the Nisqually and Green rivers have higher growth rates. This presentation examines these growth rates and empirically assess what about the freshwater ecology of these systems produces smaller, larger, younger and older smolts. Specifically, we will compare growth among systems and assess whether environmental factors such as flow and temperature help explain some of the variability in four Puget Sound Rivers: the Dungeness, Skagit, Green and Nisqually.