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Abstract for the 2021 Pacific Coast Steelhead Management Meeting

Presentation Title: A novel “real-time” steelhead abundance tool maximizes conservation and recreation

In order to manage a mark-selective conservation fishery and maintain compliance with Endangered Species Act permits managers often require in-season estimates of abundance by origin. The complex migration patterns of steelhead in the Upper Columbia River (UCR) and other basins make estimating abundance by origin at any spatial scale difficult and common techniques, such as video counts at dams, may be biased. The vast network of PIT tag detection systems throughout the UCR, which includes mainstem hydroelectric dams and tributaries sites, combined with representative PIT tagging at Priest Rapids Dam allow for near real-time estimates of escapement by origin at various spatial scales. Estimating “real-time” or weekly steelhead abundance allows for fisheries to be implemented, targeting areas with the highest proportions of hatchery-origin fish while estimating more accurate impacts to natural-origin fish throughout the UCR. As a result, conservation fisheries will be more effective (e.g., longer seasons, lower proportion of hatchery spawners, etc.) in meeting management goals.