THE WILD FISHES SURROGATE PROJECT: WHERE WE HAVE BEEN, ARE, AND WILL BE

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The Wild Fishes Surrogate Project is charged with the task of rearing juvenile Chinook salmon and steelhead trout for fish passage research in the Willamette River Basin. To date the Surrogate Project has provided roughly 400,000 juvenile Spring Chinook salmon and 13,000 juvenile steelhead trout used in various studies, including evaluations of passage, distribution, and survival at several hydropower dams, high head bypass, reservoir and dam passage fry survival, weir injury/survival, reservoir distribution and survival, and the effects of copepod infection on stress and survival in juvenile Chinook salmon. On occasion, when a study is canceled for unforeseen reasons, excess Surrogate fish have been used for other studies, such as screw trap efficiency tests throughout the basin. In addition to rearing fish for fish passage research, the Surrogate Project has been investigating the quality of fish produced using the Surrogate method. Recent projects of note recently include the gut microbiome investigations to aid in evaluating the similarities of Surrogate Chinook salmon juveniles to their wild counterparts. Studies on gut senescence have given meaningful insights into the pre-spawning mortality phenomenon observed in the Willamette River Basin returning migrants. We have been able to confirm that the presence of in-tank structure and lowered rearing density affects Chinook salmon and steelhead trout's stress response. Steelhead dorsal fin damage initial onset and significance is currently being investigated. We are also investigating the effect intermittent fasting may have on the overall survival of released juvenile Chinook salmon.