**Title:**
Application of the EDT Model for Coho Supplementation

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**Summary of Presentation:**
Due to the extirpation of the endemic Coho stock in the Yakima Subbasin, the Yakama Nation has tried to enhance and later re-establish a meaningful level of natural coho production within the Subbasin since the early 1980's. Mobrand Biometrics has recently completed a preliminary analysis based on outputs of the EDT model that utilizes hatchery produced coho salmon to re-establish naturally produced coho throughout the Yakima Subbasin. Objectives within this analysis focused on estimating optimal release numbers of smolts to maximize Natural Origin Returns (NOR's) or maximize total returns (NOR's + Hatchery Origin Returns or HOR's) and allocation of these numbers among tributaries or mainstem reaches within a given Watershed. The Yakima Subbasin was divided into three separate Watersheds of which estimation of optimal release numbers where calculated for each. Purpose of dividing the Subbasin into three separate areas was to account for local differences in productivity and carrying capacity. Each Watershed was further refined to management units consisting of tributaries and stream reaches defined within the EDT model. Adult recruitment rates specific to each management unit were used for allocation of total smolts amongst all management units within a given Watershed. A series of Beverton-Holt production functions and permutations were used for the estimated release numbers and allocation of release numbers. Population performance parameters generated from the EDT model for both NOR's and HOR's specific to the defined watersheds and management units were used as the baseline parameters in these equations.