

Pre-Spawn Mortality of Coho Salmon in Swan Creek

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Pre-spawn mortality (PSM) in Coho salmon is important to investigate because it results in the premature death (death before spawning), or 'pre-spawn mortality' of salmon, which will put their population at risk. Stormwater runoff, believed to be a main cause of PSM in local Coho, contains many chemicals from vehicles and other man made debris. This contaminated stormwater will eventually make its way into creeks and other natural bodies of water in urban areas. One aspect of this project was to calculate the rate of PSM in Swan Creek (Puyallup WA). Other aspects included community engaged research, working with Surprise Lake Middle School students and participating in community outreach that informed the public about the importance of PSM. After surveying, there was one female (out of 5 deceased Coho) that showed signs of PSM, since eggs were still present. There was no physical distress or damage to this Coho and we hypothesize that this was a case of PSM. With past surveying, the rate of PSM in 2017 was at 26.6%. There was no identification of PSM from 2018-2021. In 2022, the rate of PSM was 100%. No trends seem to be present with this data. One solution to reduce PSM is bioinfiltration. This inexpensive process filters stormwater runoff before it hits urban waterways and "cleans" the water of the contaminants from highways and roads. This method is sufficient to completely prevent all deaths involving stormwater runoff in Coho salmon.