Dissolved Oxygen and Length of Steelhead Fry

Downloaded on: 2026-11-20, From: https://mjbayly.com/stressor-response/dissolved-oxygen-and-length-steelhead-fry
Function Updated by mbayly on Thu, 04/24/2025 - 19:03.

Species Information

Common Name: Steelhead Trout
Genus: Oncorhynchus mykiss

Stressor Details

Stressor Name: Dissolved Oxygen
Units: mg/L
Metric: Dissolved Oxygen Concentration
Scale: linear
Function Type: continuous
Vital Rate/Process: Growth

Life Stage & Context

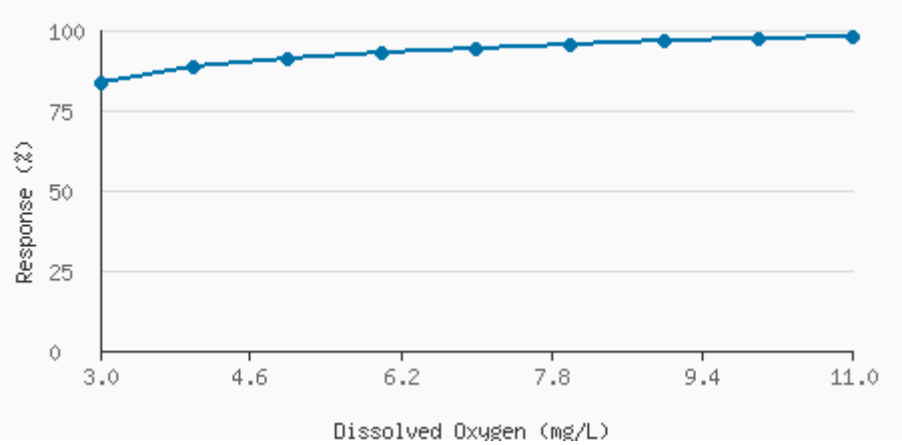
Life Stages: Fry

Descriptions

Overview

> Relationship between mean length of steelhead sac fry when hatched and dissolved oxygen concentration at which the embryos were incubated, for several water velocities during incubation and a temperature of 9.5 C. Newly hatched steelhead alevins were smaller and weaker when they had been incubated as embryos at low and intermediate DO concentrations than when they were incubated at higher concentrations. 100% of steelhead length is assumed to be 20mm.

Stressor Response Data



Stressor (X)	Mean System Capacity (%)	SD	low.limit	up.limit
3	83.15	0	0	0
4	88.2	0	0	0
5	90.75	0	0	0
6	92.75	0	0	0
7	94.35	0	0	0
8	95.55	0	0	0

9	96.5	0	0	0
10	97.05	0	0	0
11	98.1	0	0	0

Citations

Bjornn, T. C., & Reiser, D. W. (1991). Habitat requirements of salmonids in streams. American Fisheries Society Special Publication, 19(837), 104.

References

https://www.for.gov.bc.ca/hfd/LIBRARY/FFIP/Bjornn_TC1991.pdf -
https://www.for.gov.bc.ca/hfd/LIBRARY/FFIP/Bjornn_TC1991.pdf