Bjornn & Reiser 1991: Fine Sediment and Fry Emergence

Function Updated by mbayly on Thu, 01/30/2025 - 21:21.

Species Information

Common Name: Brook Trout, Steelhead Trout, Chinook Salmon, Coho Salmon
Genus: Salvelinus fontinalis, Oncorhynchus mykiss, Oncorhynchus tshawytscham Oncorhynchus kisutch

Stressor Details

Stressor Name: Sedimentation
Units: % smaller than 2 - 6.35mm
Metric: Fine Sediment
Scale: linear
Function Type: continuous
Vital Rate/Process: Survival

Life Stage & Context

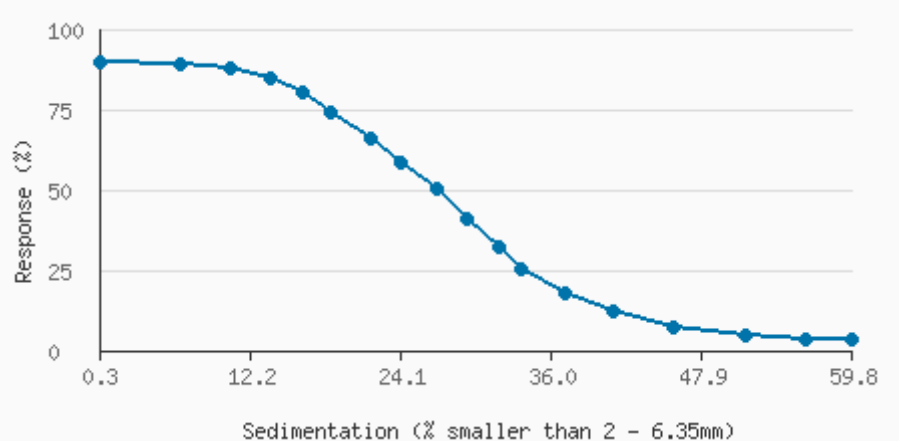
Life Stages: Fry
Season: Emergence

Descriptions

Overview

> Percentage emergence of swim-up fry placed in gravel-sand mixtures in relation to the percentage of sediment smaller than 2 - 6.4 mm. The stipled area includes data from eight tests on brook trout, steelhead, and chinook and coho salmon.

Stressor Response Data



Stressor (X)	Mean System Capacity (%)	SD	low.limit	up.limit
0.34	89.79	5.22	0	100
6.69	89.11	6.24	0	100
10.8	87.56	9.16	0	100
13.89	84.99	12.42	0	100
16.46	80.53	15.85	0	100
18.69	73.84	15.68	0	100
21.77	65.95	22.88	0	100
24.17	58.58	23.05	0	100

27.09	50.34	26.14	0	100
29.49	40.91	24.77	0	100
32.06	32.5	20.14	0	100
33.77	25.15	12.78	0	100
37.2	18.12	9.7	0	100
40.97	12.11	10.38	0	100
45.77	7.14	6.09	0	100
51.43	4.91	4.38	0	100
56.23	3.54	3.18	0	100
59.83	3.71	3.35	0	100

Citations

Bjornn, T. C., & Reiser, D. W. (1991). Habitat requirements of salmonids in streams. American Fisheries Society Special Publication, 19(837), 103.

References

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