Rempel et al 2012: Velocity and Rainbow Trout HSI (Raleigh)

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Species Information

Common Name: Rainbow Trout
Genus: Oncorhynchus mykiss

Stressor Details

Stressor Name: Velocity
Units: m/s
Metric: Water velocity
Scale: linear
Function Type: continuous

Life Stage & Context

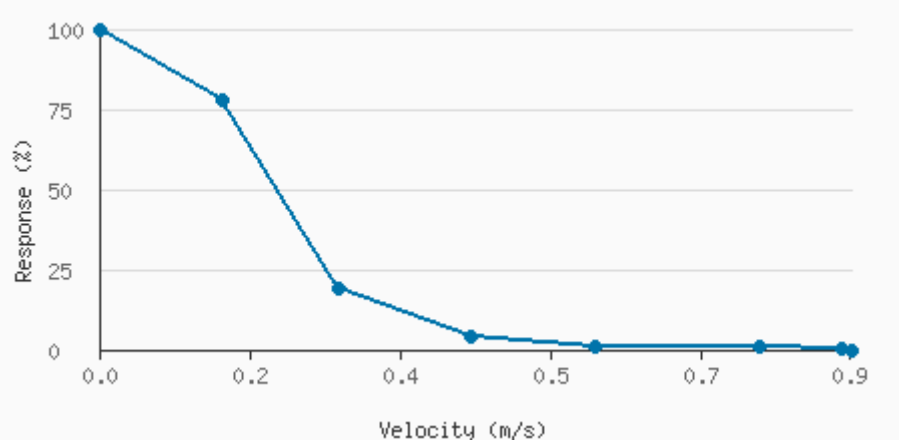
Life Stages: Fry

Descriptions

Overview

> For Rainbow Trout fry, there is good agreement between the Fraser HSC and WUP curves for both depth and velocity. The Rainbow Trout sample size of Rempel (2004) was relatively low (n=111); hence, we have adopted the WUP curves as the final HSC for 0+ Rainbow Trout in the Fraser River gravel reach. Fry show highest use of shallow and low velocity habitats over gravel-sized substrate.

Stressor Response Data



Stressor (X)	Mean System Capacity (%)	SD	low.limit	up.limit
0.00	100.00	0.00	100.00	100.00
0.15	77.98	0.00	77.98	77.98
0.29	19.26	0.00	19.26	19.26
0.45	3.85	0.00	3.85	3.85
0.60	0.94	0.00	0.94	0.94
0.80	0.65	0.00	0.65	0.65
0.90	0.07	0.00	0.07	0.07
0.91	0.00	0.00	0.00	0.00

Citations

Rempel, L. L., Healey, K., & Lewis, F. J. A. (2012). Lower Fraser River juvenile fish habitat suitability criteria. Ecosystem Management Branch, Fisheries and Oceans Canada.

Raleigh, R. F. (1984). Habitat suitability information: rainbow trout. Western Energy and Land Use Team, Division of Biological Services, Research and Development, Fish and Wildlife Service, US Department of the Interior.

References

Rempel et al. 2012 - https://www.ecofishresearch.com/wp-content/uploads/2016/09/346413.pdf

Raleigh et al. 1984 - https://sitesreservoirproject.riptideweb.com/references/REF21/_Ch11_AquaticBiologicalResources/Raleigh_et_al_1984_USFWS_HSI_ste