Rempel et al 2012: Velocity and Rainbow Trout Parr 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

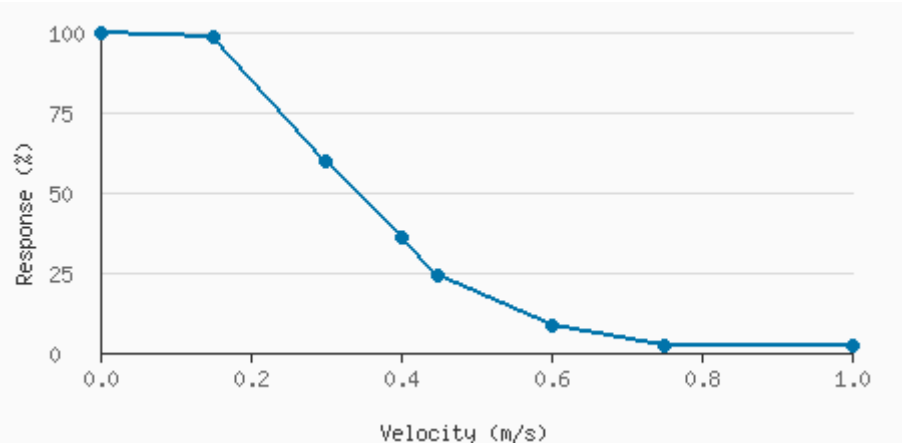
Life Stages: Parr

Descriptions

Overview

> Velocity suitability is maximal between 30 and 55 cm/s, which is greater than for 0+ Rainbow and similar to the WUP Delphi curve. There is good agreement in substrate utilization between the Fraser River data and all comparable data in the literature, with increasing use of larger substrates.
>
> Velocity units converted from cm/s to m/s.

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	98.68	0.00	98.68	98.68
0.30	59.67	0.00	59.67	59.67
0.40	35.84	0.00	35.84	35.84
0.45	24.07	0.00	24.07	24.07
0.60	8.28	0.00	8.28	8.28
0.75	2.09	0.00	2.09	2.09
1.00	2.09	0.00	2.09	2.09

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