

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

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Function Updated by stobias on Mon, 12/23/2024 - 17:51.

## 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

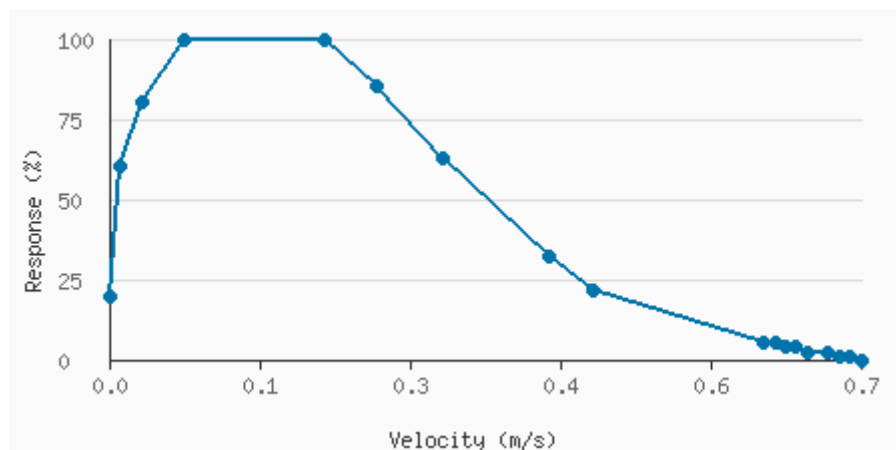
**Life Stages:** Fry

## 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	19.91	0.00	19.91	19.91
0.01	60.03	0.00	60.03	60.03
0.03	80.09	0.00	80.09	80.09
0.07	100.00	0.00	100.00	100.00
0.20	100.00	0.00	100.00	100.00
0.25	85.03	0.00	85.03	85.03
0.31	62.94	0.00	62.94	62.94
0.41	32.41	0.00	32.41	32.41

0.45	21.66	0.00	21.66	21.66
0.61	5.09	0.00	5.09	5.09
0.62	5.09	0.00	5.09	5.09
0.63	3.92	0.00	3.92	3.92
0.64	3.92	0.00	3.92	3.92
0.65	1.89	0.00	1.89	1.89
0.67	1.89	0.00	1.89	1.89
0.68	0.73	0.00	0.73	0.73
0.69	1.02	0.00	1.02	1.02
0.70	0.00	0.00	0.00	0.00

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## 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.

## References

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