# Rempel et al. 2012: Depth and Chinook HSI (USFWS)

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## Species Information

**Common Name:** Chinook Salmon
**Genus:** Oncorhynchus tshawytscha

## Stressor Details

**Stressor Name:** Depth
**Units:** m
**Metric:** Water depth
**Scale:** linear
**Function Type:** continuous

## Life Stage & Context

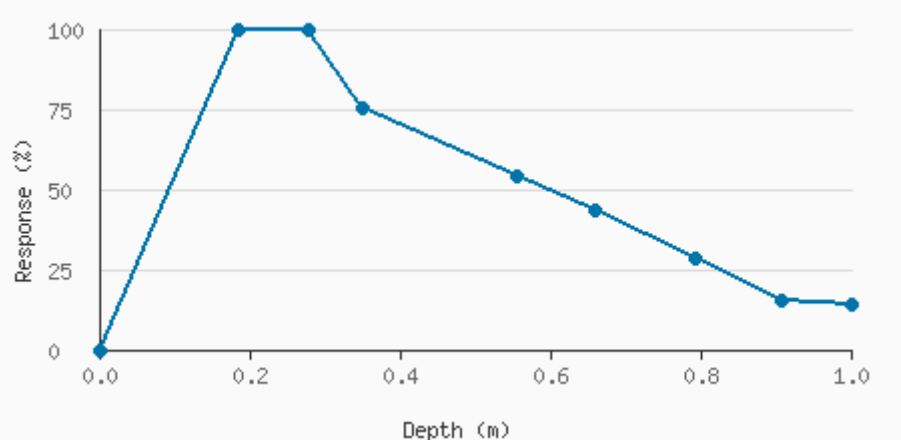
**Life Stages:** Fry

## Descriptions

### Overview

> A wide range of depths were suitable for 0+ stream/ocean-type Chinook Salmon captured in spring. The wide depth suitability may be reflective of both shallow water use by stream-type fry and a broader distribution of migrating ocean-type fish. Depth suitability for Fraser gravel reach fish is similar to the WUP curve for Chinook fry, except that suitability declines past 80 cm for Fraser fish.

## Stressor Response Data




| Stressor (X) | Mean System Capacity (%) | SD | low.limit | up.limit |
|---|---|---|---|---|
| 0.03 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.21 | 100.00 | 0.00 | 100.00 | 100.00 |
| 0.30 | 100.00 | 0.00 | 100.00 | 100.00 |
| 0.37 | 75.08 | 0.00 | 75.08 | 75.08 |
| 0.57 | 53.77 | 0.00 | 53.77 | 53.77 |
| 0.67 | 43.61 | 0.00 | 43.61 | 43.61 |
| 0.80 | 28.52 | 0.00 | 28.52 | 28.52 |
| 0.91 | 15.08 | 0.00 | 15.08 | 15.08 |

| | | | | |
|---|---|---|---|---|
| 1.00 | 13.77 | 0.00 | 13.77 | 13.77 |

## 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., Miller, W.J., and Nelson, P.C. 1986. Habitat suitability index models and instream flow suitability curves: Chinook salmon. US Fish Wildl. Serv. Biol. Rep. 82/10.122. 64 p.

## References

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