

# Generic Cover and Salmon Trout Rearing

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Function Updated by mbayly on Thu, 04/24/2025 - 19:05.

## Species Information

**Common Name:** Salmon and Trout (generalized)

## Stressor Details

**Stressor Name:** Cover

**Units:** (see notes)

**Metric:** Cover Class Categorical

**Scale:** linear

**Function Type:** step

**Vital Rate/Process:** HSI

## Life Stage & Context

**Life Stages:** Juvenile, Adults

**Geography:** Washington

**Activity:** Rearing

## Descriptions

### Overview

WDFW and Ecology recommended Habitat Suitability Criteria (HSC) or preference codes and values for instream flow modeling using PHABSIM or RHABSIM models. These values are based on habitat suitability studies. WDFW and/or Ecology staff (or individuals following WDFW-Ecology study guidelines) recorded the depth, velocity, substrate, and cover used by fish in a study reach.

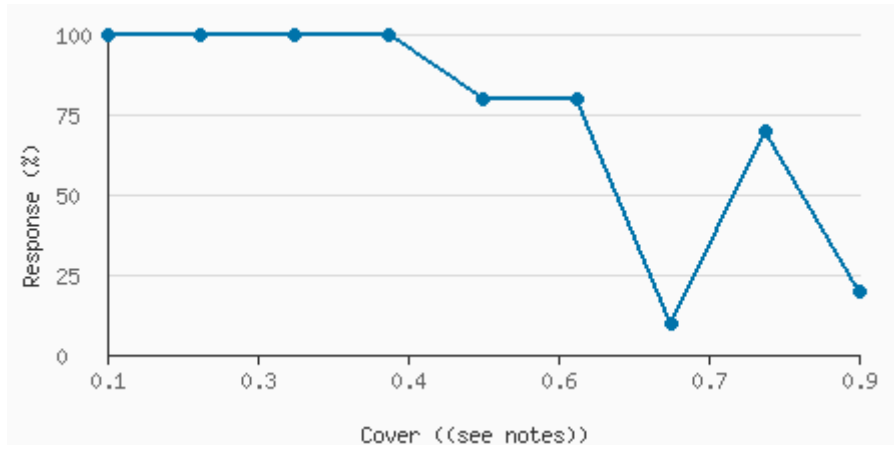
Recommended Preferences do not always accurately reflect local conditions. Therefore, these preference values should only be used after consultation with and written agreement of WDFW and/or Ecology instream flow biologists. HSI preference curves are being revised continually as new data are obtained and analyzed. Please contact the Department of Ecology or WDFW for the most recent preference curves for salmon, trout, and other game fishes.

### Cover Classes

- 0.1 - undercut bank
- 0.2 - overhanging vegetation near or touching water
- 0.3 - rootwad (including partly undercut)
- 0.4 - log jam/submerged brush pile
- 0.5 - log(s) parallel to bank
- 0.6 - aquatic vegetation
- 0.7 - short (3 feet) dense grass
- 0.9 - vegetation > 3 vertical ft above SZF

Source: TABLE 1. Generic Cover/Substrate Codes and Preference Value

## Stressor Response Data



| Raw Stressor Values | Scaled Response Values 0 to 100 | SD | low.limit | up.limit |
|---------------------|---------------------------------|----|-----------|----------|
| 0.1                 | 100                             | 0  | 0         | 100      |
| 0.2                 | 100                             | 0  | 0         | 100      |
| 0.3                 | 100                             | 0  | 0         | 100      |
| 0.4                 | 100                             | 0  | 0         | 100      |
| 0.5                 | 80                              | 0  | 0         | 100      |
| 0.6                 | 80                              | 0  | 0         | 100      |
| 0.7                 | 10                              | 0  | 0         | 100      |
| 0.8                 | 70                              | 0  | 0         | 100      |
| 0.9                 | 20                              | 0  | 0         | 100      |

## Citations

Beecher, H., Caldwell, B. (2022). INSTREAM FLOW STUDY GUIDELINES. Technical and Habitat Suitability Issues Including Fish Preference Curves. UPDATED, January 25, 2022. 04-11-007

## References

(Beecher and Caldwell 2022) - <https://apps.ecology.wa.gov/publications/documents/0411007.pdf>