Selenium and Westslope Cutthroat Trout

Function Updated by mbayly on Thu, 04/24/2025 - 18:53.

Species Information

Common Name: Westslope Cutthroat Trout
Genus: Oncorhynchus clarkii lewisi

Stressor Details

Stressor Name: Selenium
Units: µg/g
Metric: Whole body selenium concentration
Scale: linear
Function Type: continuous
Vital Rate/Process: System capacity

Life Stage & Context

Life Stages: Adults
Geography: Alberta foothills watersheds, excluding National Parks
Activity: All activities
Season: All seasons

Descriptions

Function Derivation

> Based on data from Yellowstone Cutthroat Trout; Empirical data; Correlative model; Published (peer-reviewed)

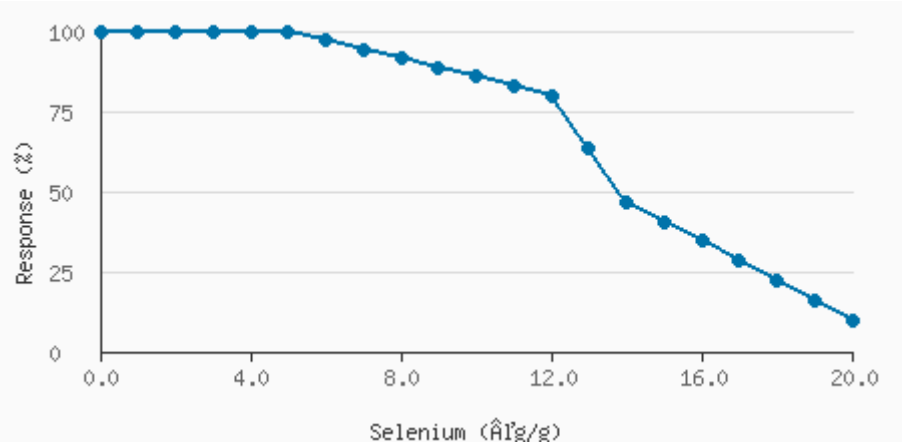
Transferability of Function

> This function was developed for and applied to Westslope Cutthroat Trout but was based on a population model for Yellowstone Cutthroat Trout (life history parameters measured in the Snake River). It should only be used on other subspecies of Cutthroat Trout with caution.

Source of Stressor Data

> Athabasca Rainbow Trout and Westslope Cutthroat Trout values at this time are set to 0 but it is our expectation that monitoring from industry will have taken place and whole-body tissue concentrations would be available.

Stressor Response Data



Selenium (µg/g whole body)	Mean System Capacity (%)	SD	low.limit	up.limit
0	100	0	0	100
1	100	0	0	100
2	100	0	0	100
3	100	0	0	100
4	100	0	0	100
5	100	0	0	100
6	97.14284	0	0	100
7	94.2857	0	0	100
8	91.42856	0	0	100
9	88.57142	0	0	100
10	85.71428	0	0	100
11	82.85714	0	0	100
12	80	0	0	100
13	63.36	0	0	100
14	46.66	0	0	100
15	40.55	0	0	100
16	34.44	0	0	100
17	28.33	0	0	100
18	22.22	0	0	100
19	16.11	0	0	100
20	10	0	0	100

Citations

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