Generic - Mean Annual Discharge

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Function Updated by leah.egeryhaley on Wed, 06/17/2026 - 18:21.

Species Information

Common Name: Generic

Stressor Details

Stressor Name: Flow
Units: %
Metric: Mean Annual Discharge
Scale: linear
Function Type: continuous
Vital Rate/Process: Habitat capacity

Life Stage & Context

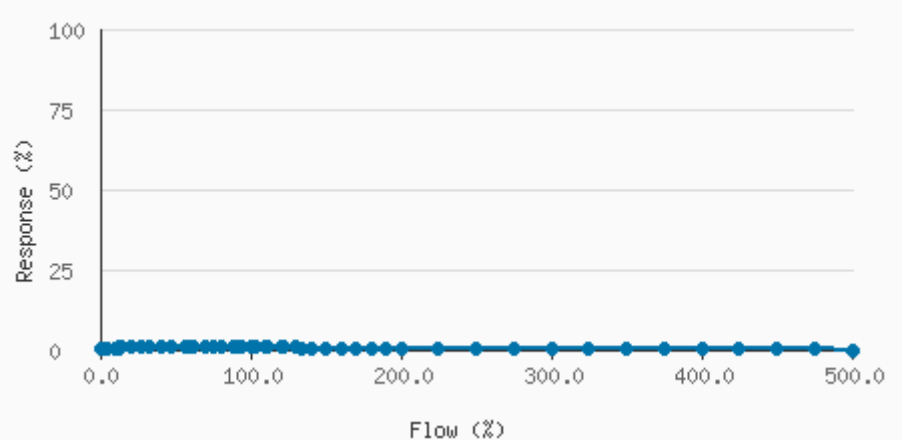
Life Stages: All life stages
Geography: Generic
Activity: All activities
Season: All seasons

Descriptions

Overview

> This stressor-response function is the average function derived from a meta-analysis of 3X published studies on the response of salmonids to altered flows, including both observational studies and flow manipulation experiments...

Stressor Response Data



?PERCENT_MAD	Mean System Capacity (%)	SD	low.limit	up.limit
0	0.16	0	0.13	0.2
4.52	0.31	0	0.27	0.34
10	0.51	0	0.39	0.64
12.58	0.61	0	0.43	0.81
13.23	0.63	0	0.45	0.81
13.55	0.63	0	0.47	0.82
20	0.69	0	0.53	0.86

27.1	0.75	0	0.59	0.92
33.23	0.8	0	0.64	0.97
40.65	0.86	0	0.7	1.03
46.77	0.91	0	0.76	1.09
56	1.006927099	0	0.7	1.18
60	0.984098123	0	0.68	1.22
62.26	0.968	0	0.67	1.25
69.68	0.93	0	0.64	1.33
70	0.928342013	0	0.64	1.32
74.84	0.9	0	0.61	1.29
80	0.874453815	0	0.58	1.26
88.39	0.829	0	0.54	1.21
90	0.822417598	0	0.53	1.2
94.19	0.8	0	0.51	1.185
100	0.772217149	0	0.48	1.16
103.23	0.755	0	0.47	1.15
110	0.723835956	0	0.43	1.125
111.29	0.7168	0	0.428	1.12
120	0.6772572	0	0.38	1.08
122.26	0.66687	0	0.365	1.075
130	0.632463735	0	0.33	1.05
133.87	0.615	0	0.315	1.04
140	0.589438075	0	0.29	1.02
150	0.548162375	0	0.25	0.985
160	0.508618412	0	0.21	0.96
170	0.470787568	0	0.18	0.94
180	0.434650801	0	0.15	0.92
190	0.400188627	0	0.12	0.9
200	0.367381088	0	0.09	0.88
225	0.28	0	0.051	0.83
250	0.215	0	0.028	0.78
275	0.165	0	0.01	0.735
300	0.125512713	0	0	0.69
325	0.09			0.65
350	0.06			0.61
375	0.04			0.575
400	0.021844698			0.54
425	0.015			0.5025
450	0.01			0.465
475	0.006			0.43
500	0			0.4
600				0.29

700				0.21

Citations

Jordan S Rosenfeld, Daniel Enright, Developing generalized flow ecology relationships for stream salmonids: Providing a clearer empirical basis for minimum flow regulations, Transactions of the American Fisheries Society, Volume 154, Issue 2, March 2025, Pages 162–178, https://doi.org/10.1093/tafafs/vnaf001