Mean Annual Discharge and Steelhead

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Function Updated by leah.egeryhaley on Tue, 06/23/2026 - 18:54.

Species Information

Common Name: Steelhead
Genus: Oncorhynchus mykiss irideus

Stressor Details

Stressor Name: Flow
Units: %
Metric: Mean Annual Discharge (MAD)
Scale: linear
Function Type: continuous
Vital Rate/Process: Over-summer survival

Life Stage & Context

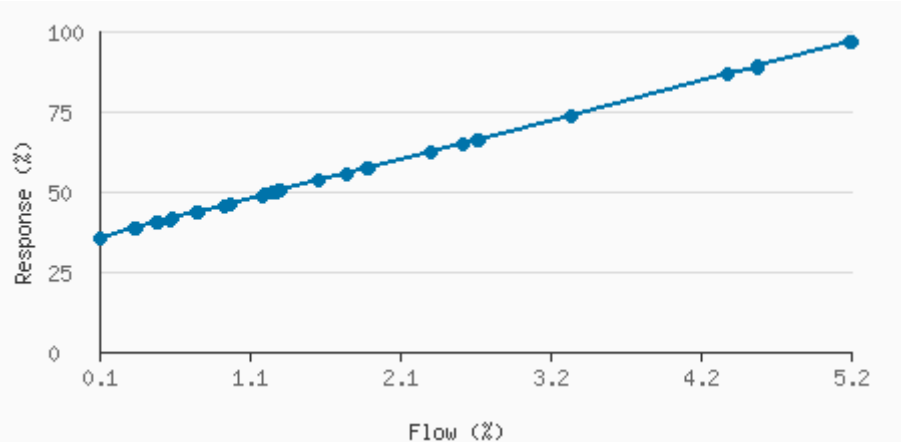
Life Stages: Juvenile
Geography: Maacama Creek, Mark West Creek, Santa Rosa Creek, Green Valley Creek. California, USA
Season: Summer

Descriptions

Function Derivation

> Observational data. Final curve was derived from linear regression.

Stressor Response Data



?PERCENT_MAD	Mean System Capacity (%)	SD	low.limit	up.limit
0.1316	35.44236	0	0	100
0.13598	35.495358	0	0	100
0.36256	38.236976	0	0	100
0.36262	38.237702	0	0	100
0.37365	38.371165	0	0	100
0.37368	38.371528	0	0	100
0.37587	38.398027	0	0	100
0.5122	40.04762	0	0	100

0.51477	40.078717	0	0	100
0.51705	40.106305	0	0	100
0.51899	40.129779	0	0	100
0.52758	40.233718	0	0	100
0.53226	40.290346	0	0	100
0.60673	41.191433	0	0	100
0.62	41.352	0	0	100
0.77635	43.243835	0	0	100
0.77842	43.268882	0	0	100
0.78526	43.351646	0	0	100
0.78956	43.403676	0	0	100
0.96969	45.583249	0	0	100
0.97197	45.610837	0	0	100
1.0052	46.01292	0	0	100
1.00524	46.013404	0	0	100
1.00955	46.065555	0	0	100
1.22951	48.727071	0	0	100
1.22956	48.727676	0	0	100
1.23388	48.779948	0	0	100
1.23598	48.805358	0	0	100
1.28678	49.420038	0	0	100
1.29109	49.472189	0	0	100
1.30847	49.682487	0	0	100
1.32624	49.897504	0	0	100
1.33731	50.031451	0	0	100
1.35027	50.188267	0	0	100
1.59914	53.199594	0	0	100
1.60152	53.228392	0	0	100
1.60346	53.251866	0	0	100
1.60803	53.307163	0	0	100
1.78379	55.433859	0	0	100
1.78825	55.487825	0	0	100
1.79047	55.514687	0	0	100
1.92029	57.085509	0	0	100
1.92252	57.112492	0	0	100
1.9333	57.24293	0	0	100
1.93577	57.272817	0	0	100
2.35349	62.327229	0	0	100
2.35565	62.353365	0	0	100
2.56688	64.909248	0	0	100
2.56905	64.935505	0	0	100
2.57136	64.963456	0	0	100

2.66385	66.082585	0	0	100
2.67054	66.163534	0	0	100
2.67707	66.242547	0	0	100
3.29154	73.677634	0	0	100
4.33678	86.325038	0	0	100
4.33698	86.327458	0	0	100
4.33704	86.328184	0	0	100
4.53657	88.742497	0	0	100
4.53663	88.743223	0	0	100
4.53915	88.773715	0	0	100
5.16288	96.320848	0	0	100
5.16573	96.355333	0	0	100

Citations

Grantham, T.E., Newburn, D.A., McCarthy, M.A., and Merenlender, A.M. 2012. The role of streamflow and land use in limiting oversummer survival of juvenile steelhead in California streams. Trans. Am. Fish. Soc. 141:585-598.