

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Redwater River, Butte County
15-0005-00
1993

Table 1. Population and Biomass Estimates for Redwater River

Site Number: 292	Date Sampled: 09/16/1993	Conductivity (umhos/cm): 1020
Site Midpoint (Latitude, Longitude): 44.59541465, -103.89073296	Site Length (m): 100	pH: 8.8
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 8.2	Water Temperature (C): 12.0
Stream Classification: BR2	Number of Pass: 3	Voltage: 100

Species	Size Class	Total Number Captured	Est. # in site	Upper 95% CI	Lower 95% CI	# per Hectacre	Kg per Hectacre	# per Km	# per Acre	lb. per Acre	# per Mile	Mean Length (mm)	Mean Weight (grams)
Brown Trout	<200mm	1	1	5	1	12	0	10	5	0.10	16	105.0	9.0
Brown Trout	>=200mm	7	24	190	7	291	94	240	118	83.96	386	312.4	322.9
Brown Trout	All	8	7	10	8	85	24	70	34	21.51	113	286.5	283.6
Longnose Dace	All	4	4	7	4	49	0	40	20	0.28	64	93.0	6.5
Mountain Sucker	All	10	20	70	10	243	12	200	98	10.79	322	157.9	49.8
White Sucker	All	12	27	102	12	328	43	270	133	38.40	434	193.2	131.3

Site Number: 570	Date Sampled: 09/16/1993	Conductivity (umhos/cm): 1020
Site Midpoint (Latitude, Longitude): 44.57807483, -104.01316146	Site Length (m): 100	pH: 8.7
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 7.4	Water Temperature (C): 11.0
Stream Classification: BR3	Number of Pass: 3	Voltage: 150

Species	Size Class	Total Number Captured	Est. # in site	Upper 95% CI	Lower 95% CI	# per Hectacre	Kg per Hectacre	# per Km	# per Acre	lb. per Acre	# per Mile	Mean Length (mm)	Mean Weight (grams)
Brown Trout	<200mm	7	7	7	7	95	1	70	38	0.84	113	102.7	10.0
Brown Trout	>=200mm	4	4	4	4	54	7	40	22	6.08	64	230.8	126.0

Brown Trout	All	11	11	11	11	149	8	110	60	6.93	177	149.3	52.2
Longnose Dace	All	38	37	48	38	500	1	370	203	1.13	595	60.6	2.5
Shorthead Redhorse	All	2	2	4	2	27	1	20	11	0.59	32	142.0	24.5
White Sucker	All	26	35	55	26	473	36	350	192	32.32	563	144.2	76.5

Stream sites are classified based on the estimates of adult trout over eight inches that exist within the site. Estimates are derived from 3-pass backpack electrofishing surveys at 100-meter sites within streams. While all fish in the site are collected and measured, only trout species are used for classifications. Sites are numbered in accordance for the distance (m) from the stream confluence of a higher order stream/river.

Based on number of trout in excess of eight inches	
Class BR1	Number of wild Brown Trout exceeds 150 per acre
Class BR2	Number of wild Brook Trout ranges from 25 to 150 per acre
Class BR3	Number of wild Brown Trout is less than 25 per acre
Class BK1	Number of wild Brook Trout exceeds 150 per acre
Class BK2	Number of wild Brook Trout ranges from 25 to 150 per acre
Class BK3	Number of wild Brook Trout is less than 25 per acre
Class RB1	Number of wild Rainbow Trout exceeds 25 per acre
Class RB2	Number of wild Rainbow Trout is less than 25 per acre

Table 2. Species composition and population estimates on Redwater River, 1983-1993

Site 292

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brown Trout <200mm	Sep 16, 1993	1	1-5	
Brown Trout >=200mm	Sep 16, 1993	24	7-190	BR2
Longnose Dace	Sep 16, 1993	4	4-7	
Mountain Sucker	Sep 16, 1993	20	10-70	
White Sucker	Sep 16, 1993	27	12-102	

Site 570

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brown Trout <200mm	Sep 16, 1993	7	7-7	

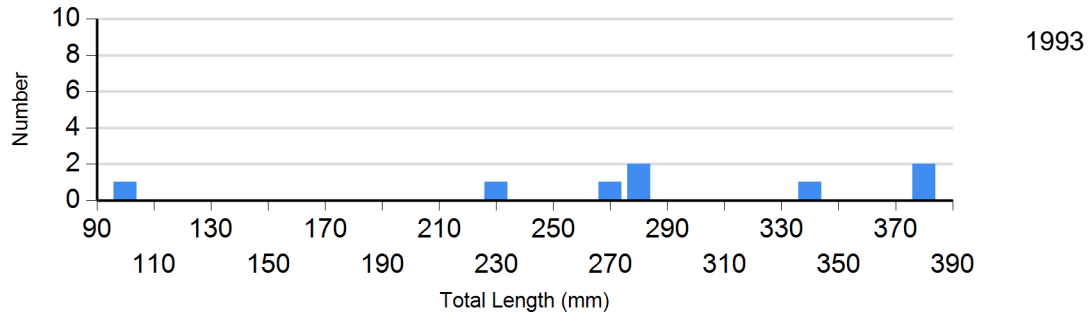
Brown Trout >=200mm	Sep 16, 1993	4	4-4	BR3
Longnose Dace	Sep 16, 1993	37	38-48	
Shorthead Redhorse	Sep 16, 1993	2	2-4	
White Sucker	Sep 16, 1993	35	26-55	

Length Frequency Distribution

Length frequency histogram of species sampled by year.

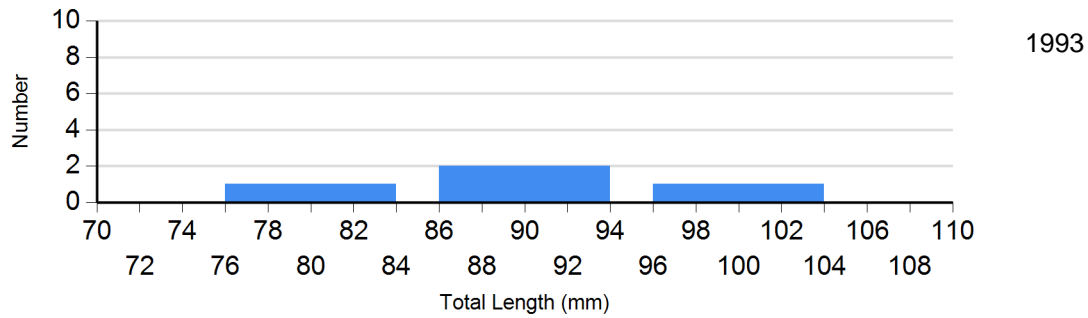
Site: 292

Species: Brown Trout



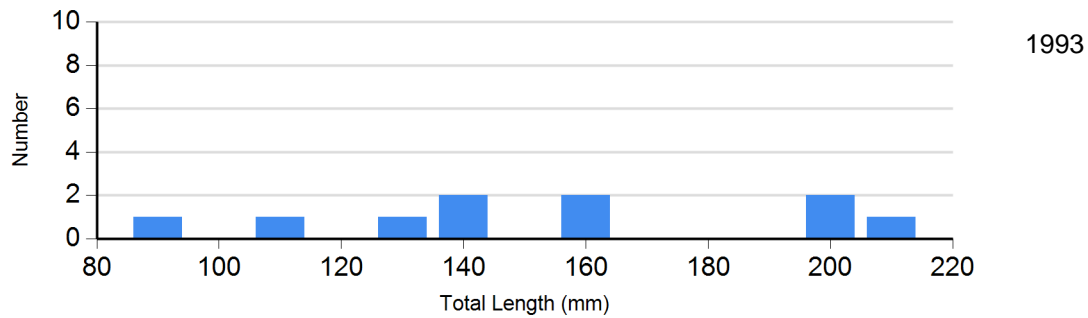
Site: 292

Species: Longnose Dace

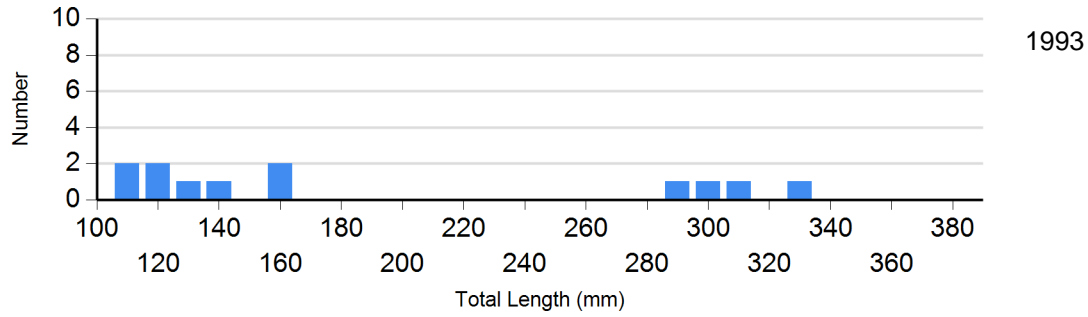


Site: 292

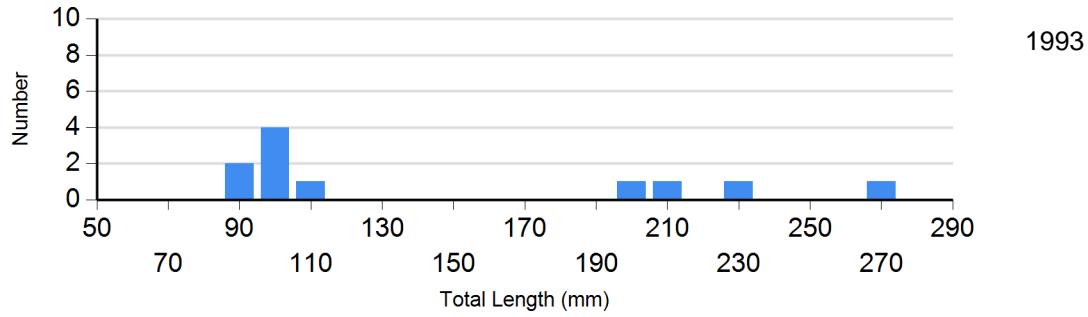
Species: Mountain Sucker



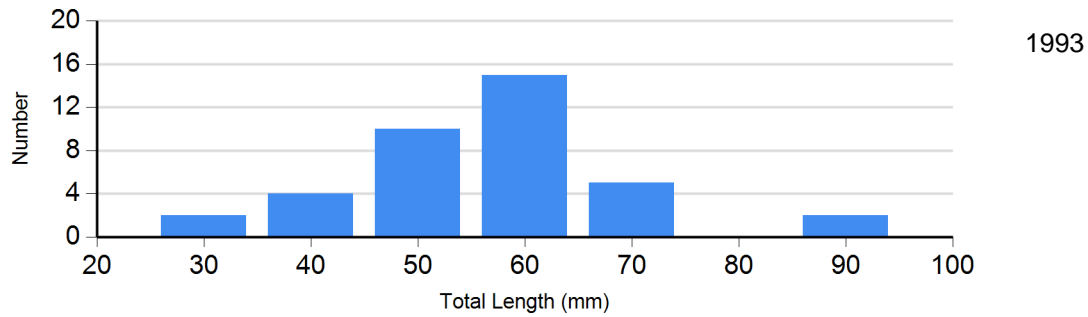
Site: 292
Species: White Sucker



Site: 570
Species: Brown Trout



Site: 570
Species: Longnose Dace



Site: 570
Species: White Sucker

