

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Elk Creek, Meade County
09-0015-00
1997

Table 1. Population and Biomass Estimates for Elk Creek

Site Number: 2391	Date Sampled: 07/31/1997	Conductivity (umhos/cm): 295
Site Midpoint (Latitude, Longitude): 44.27990648, -103.63443148	Site Length (m): 100	pH: 8.6
Survey Completed by:	Mean Width (m): 5.0	Water Temperature (C): 15.0
Stream Classification: BK1, BR0	Number of Pass: 2	Voltage: 300

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)
Brook Trout	<200mm	21	20	26	21	402	13	200	163	11.58	322	143.7	32.3
Brook Trout	>=200mm	19	40	124	19	803	131	400	325	116.75	644	248.9	162.8
Brook Trout	All	40	39	47	40	783	74	390	317	65.92	628	193.7	94.3
Brown Trout	<200mm	8	8	10	8	161	9	80	65	7.96	129	171.1	55.5
Brown Trout	All	8	8	10	8	161	9	80	65	7.96	129	171.1	55.5
Longnose Dace	All	360	359	384	360	7209	31	3590	2920	27.43	5776	70.0	4.3
Mountain Sucker	All	167	213	254	172	4277	118	2130	1732	105.24	3427	139.1	27.6
White Sucker	All	27	41	77	27	823	49	410	333	43.92	660	155.5	59.7

Site Number: 2460	Date Sampled: 08/25/1997	Conductivity (umhos/cm): 383
Site Midpoint (Latitude, Longitude): 44.27675204, -103.69560209	Site Length (m): 97	pH: 9.1
Survey Completed by:	Mean Width (m): 2.4	Water Temperature (C): 12.0
Stream Classification: BK1, BR2	Number of Pass: 3	Voltage:

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)
Brook Trout	<200mm	85	96	109	85	4034	109	990	1634	97.24	1592	127.0	27.0
Brook Trout	>=200mm	16	16	17	16	672	83	165	272	74.43	265	225.9	124.0
Brook Trout	All	101	110	121	101	4622	197	1134	1872	175.47	1825	142.7	42.5
Brown Trout	<200mm	2	2	4	2	84	2	21	34	1.61	33	114.0	21.5
Brown Trout	>=200mm	2	2	4	2	84	17	21	34	15.61	33	256.5	208.0
Brown Trout	All	4	4	7	4	168	19	41	68	17.22	66	185.3	114.8
Longnose Dace	All	138	201	263	139	8445	65	2072	3420	58.15	3334	90.5	7.7
Mountain Sucker	All	143	250	369	143	10504	405	2577	4254	361.58	4147	149.4	38.6
White Sucker	All	5	5	7	5	210	20	52	85	18.05	83	194.6	96.2

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 Elk Creek, 1987-1997

Site 2391

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jul 31, 1997	20	21-26	
Brook Trout >=200mm	Jul 31, 1997	40	19-124	BK1
Brown Trout <200mm	Jul 31, 1997	8	8-10	
Longnose Dace	Jul 31, 1997	359	360-384	
Mountain Sucker	Jul 31, 1997	213	172-254	
White Sucker	Jul 31, 1997	41	27-77	

Site 2460

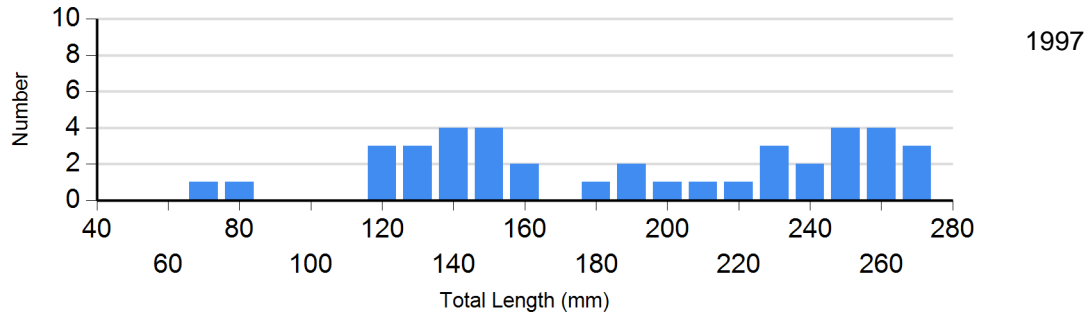
Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Aug 25, 1997	96	85-109	
Brook Trout >=200mm	Aug 25, 1997	16	16-17	BK1
Brown Trout <200mm	Aug 25, 1997	2	2-4	
Brown Trout >=200mm	Aug 25, 1997	2	2-4	BR2
Longnose Dace	Aug 25, 1997	201	139-263	
Mountain Sucker	Aug 25, 1997	250	143-369	
White Sucker	Aug 25, 1997	5	5-7	

Length Frequency Distribution

Length frequency histogram of species sampled by year.

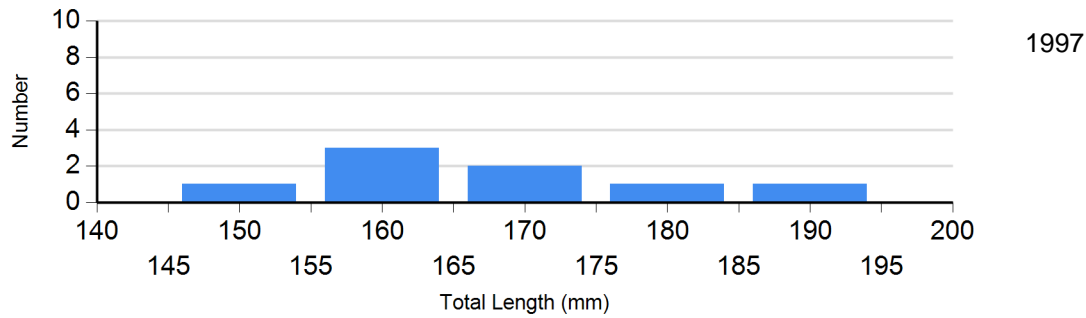
Site: 2391

Species: Brook Trout



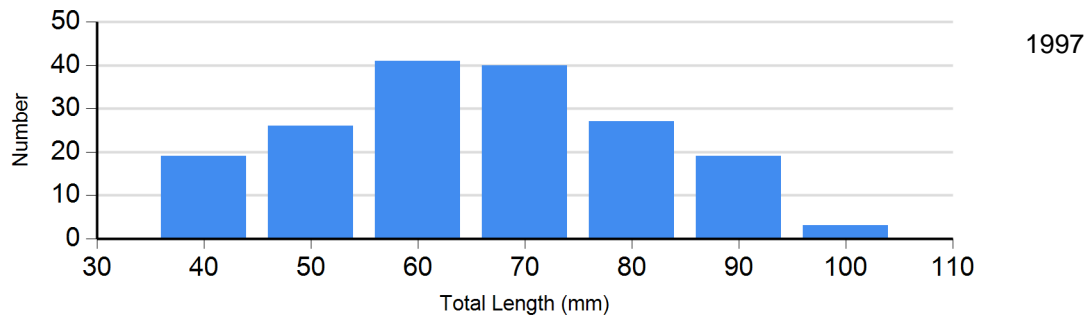
Site: 2391

Species: Brown Trout

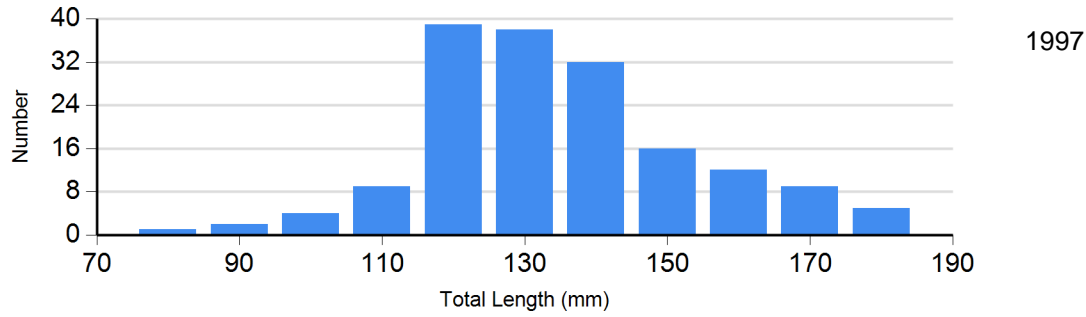


Site: 2391

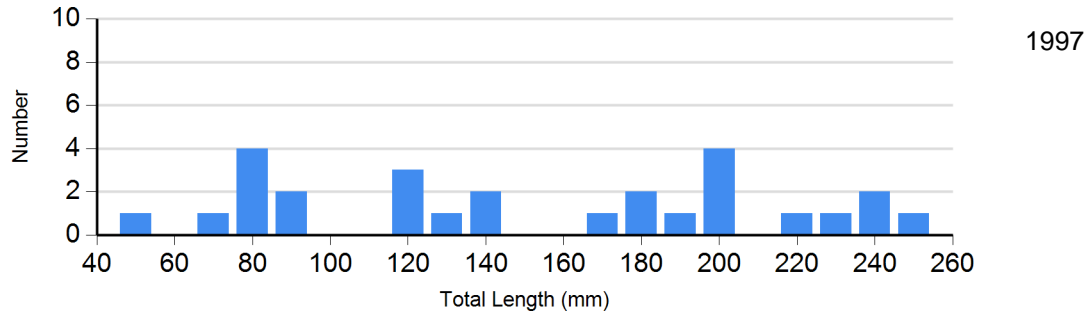
Species: Longnose Dace



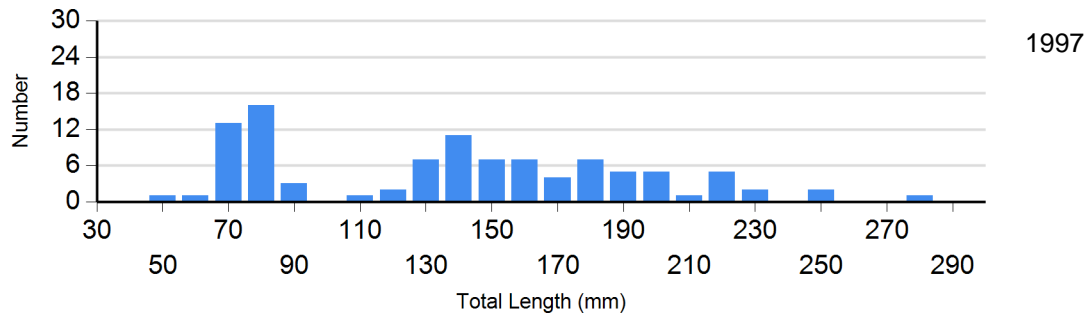
Site: 2391
Species: Mountain Sucker



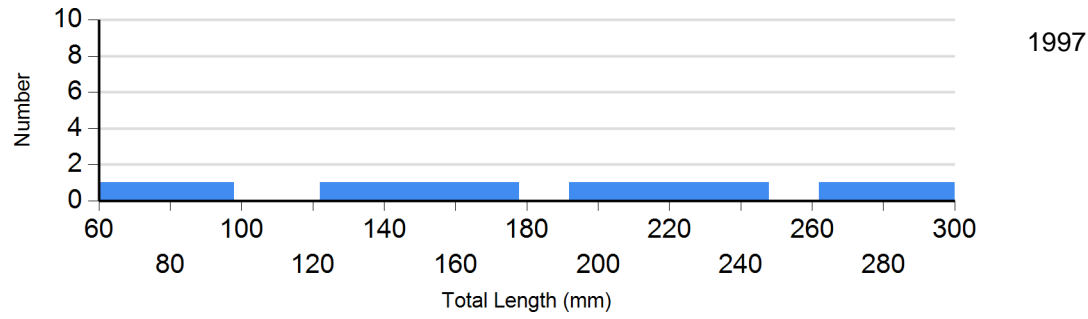
Site: 2391
Species: White Sucker



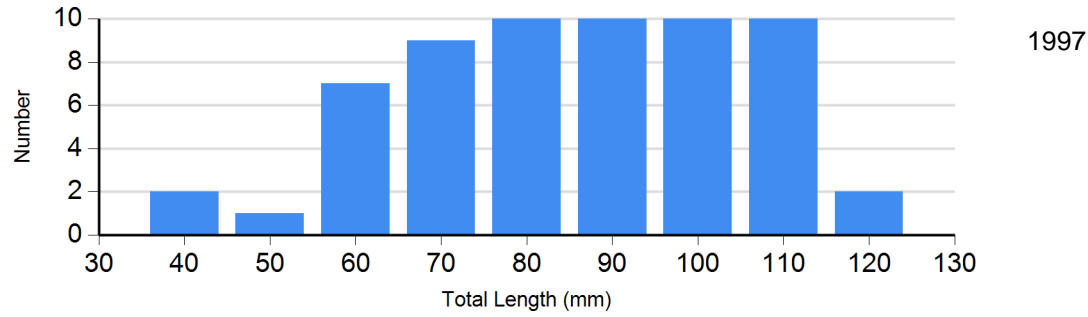
Site: 2460
Species: Brook Trout



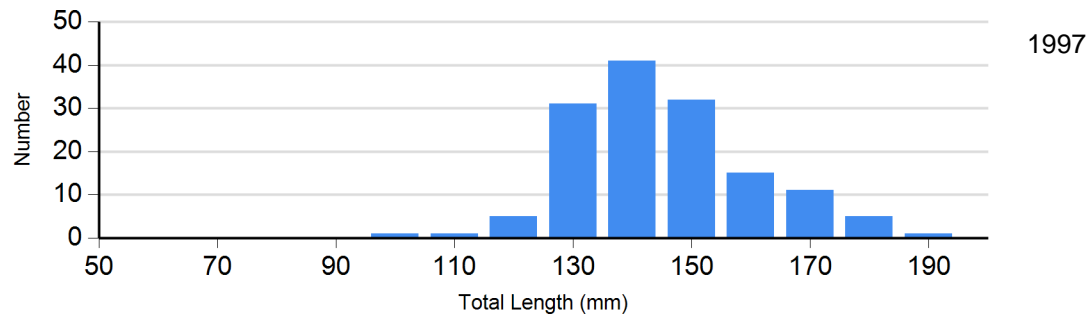
Site: 2460
Species: Brown Trout



Site: 2460
Species: Longnose Dace



Site: 2460
Species: Mountain Sucker



Site: 2460
Species: White Sucker

