

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Castle Creek - North Fork, Pennington County
02-0072-00
1994

Table 1. Population and Biomass Estimates for Castle Creek - North Fork

Site Number: 1	Date Sampled: 06/20/1994	Conductivity (umhos/cm): 395
Site Midpoint (Latitude, Longitude): 44.07435942, -103.74877371	Site Length (m): 100	pH: 8.7
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 2.3	Water Temperature (C): 18.0
Stream Classification: BK0, BR3	Number of Pass: 3	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	4	4	4	4	177	3	40	72	2.25	64	115.5	14.3
Brook Trout	All	4	4	4	4	177	3	40	72	2.25	64	115.5	14.3
Brown Trout	<200mm	17	17	19	17	752	9	170	305	7.74	274	96.6	11.5
Brown Trout	>=200mm	1	1	1	1	44	4	10	18	3.24	16	206.0	82.0
Brown Trout	All	18	18	20	18	796	12	180	323	10.98	290	102.7	15.4
Longnose Dace	All	24	24	26	24	1062	6	240	430	5.02	386	82.4	5.3
Mountain Sucker	All	6	6	9	6	265	16	60	108	14.14	97	178.8	59.7

Site Number: 55	Date Sampled: 06/21/1994	Conductivity (umhos/cm): 355
Site Midpoint (Latitude, Longitude): 44.08596412, -103.79193843	Site Length (m): 100	pH: 8.0
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 1.0	Water Temperature (C): 13.0
Stream Classification: BK0	Number of Pass: 4	Voltage: 250

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	2	2	3	2	204	10	20	83	9.29	32	159.5	51.0

Brook Trout	All	2	2	3	2	204	10	20	83	9.29	32	159.5	51.0
Longnose Dace	All	9	10	15	9	1020	5	100	413	4.15	161	77.1	4.6
Mountain Sucker	All	9	9	11	9	918	8	90	372	6.87	145	92.2	8.4

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 Castle Creek - North Fork, 1984-1994

Site 1

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jun 20, 1994	4	4-4	
Brown Trout <200mm	Jun 20, 1994	17	17-19	
Brown Trout >=200mm	Jun 20, 1994	1	1-1	BR3
Longnose Dace	Jun 20, 1994	24	24-26	
Mountain Sucker	Jun 20, 1994	6	6-9	

Site 55

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jun 21, 1994	2	2-3	

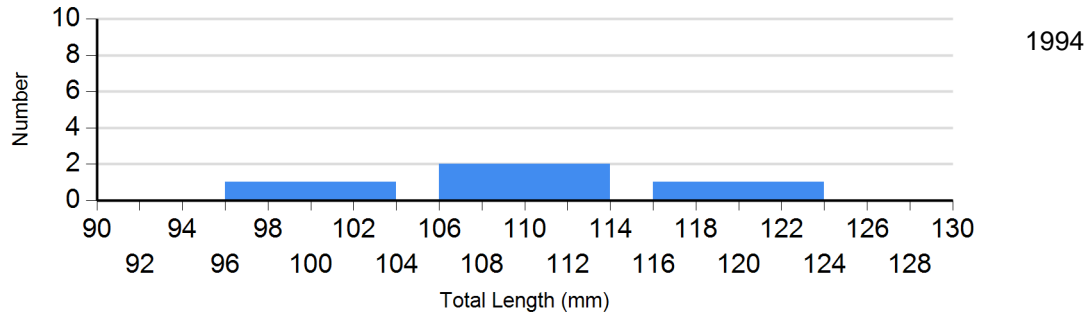
Longnose Dace	Jun 21, 1994	10	9-15
Mountain Sucker	Jun 21, 1994	9	9-11

Length Frequency Distribution

Length frequency histogram of species sampled by year.

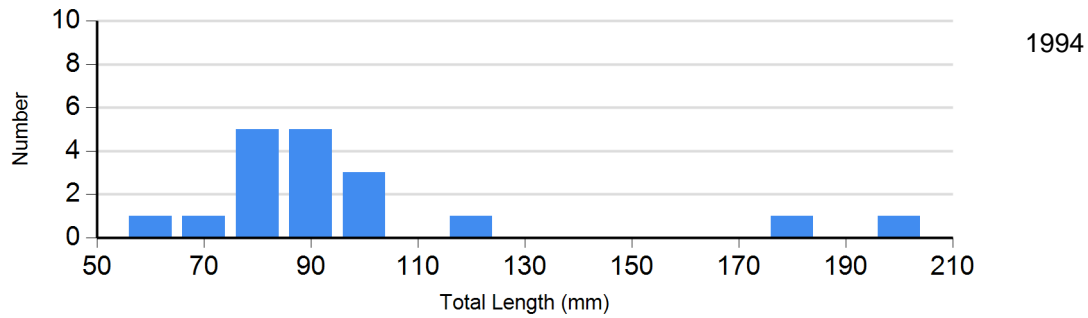
Site: 1

Species: Brook Trout



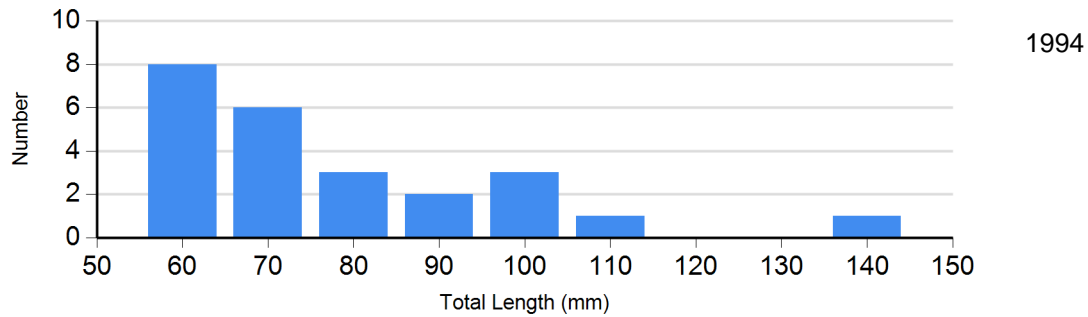
Site: 1

Species: Brown Trout

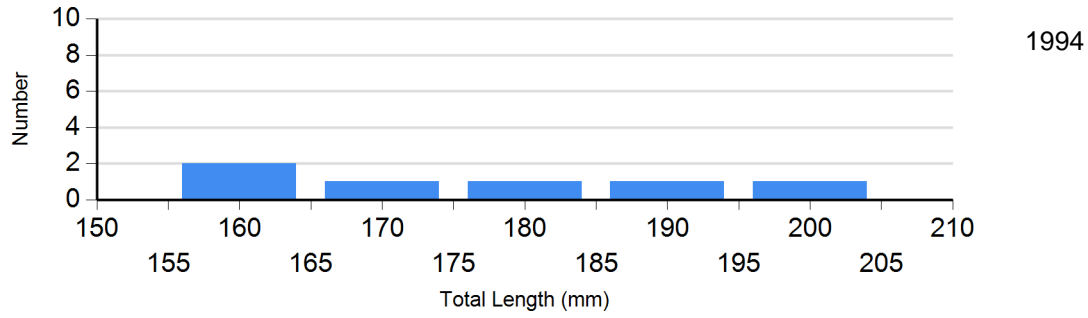


Site: 1

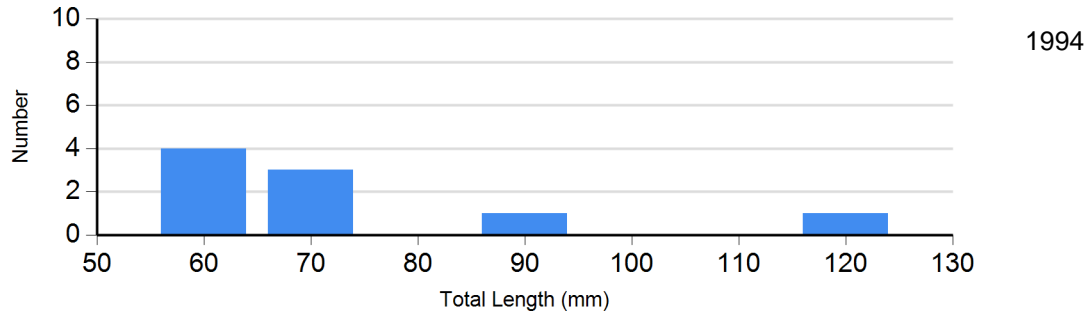
Species: Longnose Dace



Site: 1
Species: Mountain Sucker



Site: 55
Species: Longnose Dace



Site: 55
Species: Mountain Sucker

