

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Castle Creek - South Fork, Pennington County
02-0073-00
2008

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

Site Number: 2	Date Sampled: 05/29/2008	Conductivity (umhos/cm): 426
Site Midpoint (Latitude, Longitude): 44.01176175, -103.83136031	Site Length (m): 100	pH: 8.7
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 4.6	Water Temperature (C): 13.8
Stream Classification: BK2, RB1	Number of Pass: 1	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	76	76	76	76	1659	54	760	672	48.50	1223	138.0	32.8
Brook Trout	>=200mm	11	11	11	11	240	23	110	97	20.17	177	212.4	94.1
Brook Trout	All	87	87	87	87	1899	77	870	769	68.67	1400	147.4	40.5
Rainbow Trout	<200mm	39	39	39	39	851	26	390	345	23.17	628	114.7	30.5
Rainbow Trout	>=200mm	22	22	22	22	480	149	220	194	132.96	354	320.8	310.1
Rainbow Trout	All	61	61	61	61	1331	175	610	539	156.13	981	189.0	131.3

Site Number: 73	Date Sampled: 07/21/2008	Conductivity (umhos/cm): 437
Site Midpoint (Latitude, Longitude): 43.98224960, -103.86466763	Site Length (m): 100	pH: 8.7
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 1.8	Water Temperature (C): 17.5
Stream Classification: BK0	Number of Pass: 1	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	12	12	12	12	657	23	120	266	20.13	193	134.0	34.3
Brook Trout	All	12	12	12	12	657	23	120	266	20.13	193	134.0	34.3

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 - South Fork, 1998-2008

Site 2

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	May 29, 2008	76	76-76	
Brook Trout >=200mm	May 29, 2008	11	11-11	BK2
Rainbow Trout <200mm	May 29, 2008	39	39-39	
Rainbow Trout >=200mm	May 29, 2008	22	22-22	RB1

Site 73

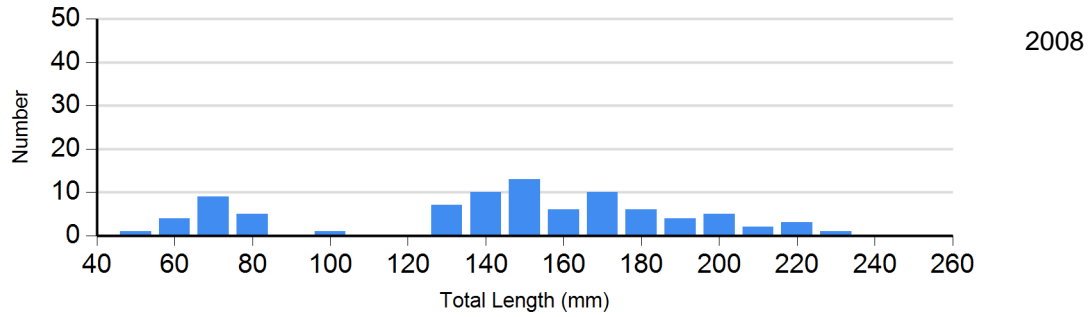
Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Sep 18, 2006	32	30-38	
	Jul 21, 2008	12	12-12	

Length Frequency Distribution

Length frequency histogram of species sampled by year.

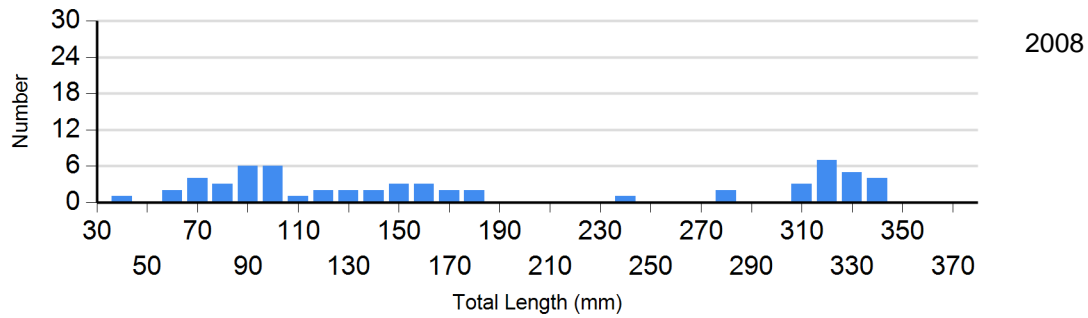
Site: 2

Species: Brook Trout



Site: 2

Species: Rainbow Trout



Site: 73

Species: Brook Trout

