

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Castle Creek - South Fork, Pennington County
02-0073-00
2016

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

Site Number: 68	Date Sampled: 07/19/2016	Conductivity (umhos/cm): 218
Site Midpoint (Latitude, Longitude): 43.98005763, -103.86027711	Site Length (m): 100	pH: 7.4
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 2.1	Water Temperature (C):
Stream Classification: BK2, RB2	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	112	115	120	112	5524	157	1150	2237	140.42	1850	122.3	28.5
Brook Trout	>=200mm	2	2	2	2	96	9	20	39	8.28	32	206.5	96.5
Brook Trout	All	114	117	122	114	5620	169	1170	2276	150.71	1883	123.7	30.0
Rainbow Trout	<200mm	1	1	1	1	48	2	10	19	1.46	16	143.0	34.0
Rainbow Trout	>=200mm	1	1	1	1	48	4	10	19	3.69	16	200.0	86.0
Rainbow Trout	All	2	2	2	2	96	6	20	39	5.15	32	171.5	60.0

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, 2006-2016

Site 68

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Aug 31, 2009	70	70-72	
	Jul 19, 2016	115	112-120	
Brook Trout >=200mm	Jul 19, 2016	2	2-2	BK2
Rainbow Trout <200mm	Jul 19, 2016	1	1-1	
Rainbow Trout >=200mm	Jul 19, 2016	1	1-1	RB2

Length Frequency Distribution

Length frequency histogram of species sampled by year.

Site: 68

Species: Brook Trout

