

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Castle Creek, Pennington County
02-0071-00
2015

Table 1. Population and Biomass Estimates for Castle Creek

Site Number: 181	Date Sampled: 09/23/2015	Conductivity (umhos/cm): 380
Site Midpoint (Latitude, Longitude): 44.06727345, -103.70716435	Site Length (m): 100	pH: 7.4
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 3.9	Water Temperature (C): 7.8
Stream Classification: 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)
Brown Trout	<200mm	38	39	42	38	991	36	390	401	31.94	628	129.7	36.1
Brown Trout	>=200mm	11	11	12	11	279	30	110	113	26.65	177	219.2	106.8
Brown Trout	All	49	50	53	49	1270	71	500	514	63.57	805	149.8	56.1

Site Number: 213	Date Sampled: 09/23/2015	Conductivity (umhos/cm): 382
Site Midpoint (Latitude, Longitude): 44.07800737, -103.71756559	Site Length (m): 100	pH: 7.0
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 5.6	Water Temperature (C): 8.2
Stream Classification: 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)
Brown Trout	<200mm	20	21	25	20	374	11	210	152	9.44	338	92.3	28.3
Brown Trout	>=200mm	5	5	6	5	89	14	50	36	12.10	80	236.0	152.0
Brown Trout	All	25	26	30	25	464	35	260	188	31.39	418	121.0	75.8
White Sucker	All	3	3	4	3	53	21	30	22	18.85	48	328.3	394.7

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, 2005-2015

Site 181

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brown Trout <200mm	Jul 08, 2009	7	7-7	
	Sep 23, 2015	39	38-42	
Brown Trout >=200mm	Jul 08, 2009	2	2-2	BR3
	Sep 23, 2015	11	11-12	BR2

Site 213

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brown Trout <200mm	Jun 09, 2009	16	16-17	
	Jul 02, 2014	29	29-31	

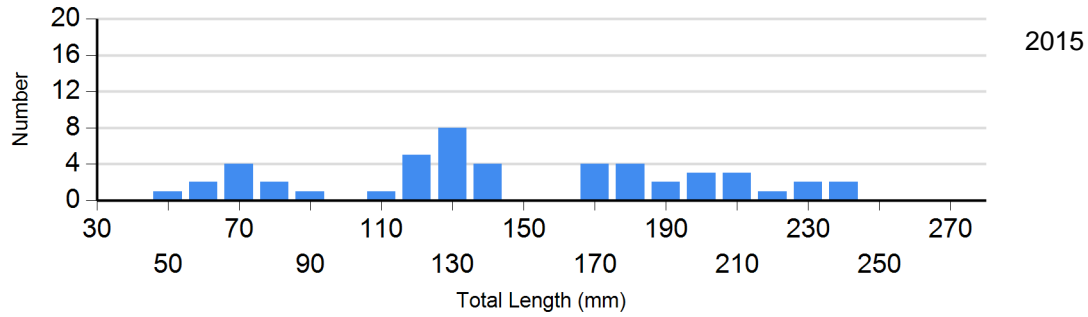
Brown Trout <200mm	Sep 23, 2015	21	20-25	
Brown Trout >=200mm	Jun 09, 2009	4	4-5	BR2
	Jul 02, 2014	14	14-15	BR2
	Sep 23, 2015	5	5-6	BR2
White Sucker	Jun 09, 2009	1	1-2	
	Sep 23, 2015	3	3-4	

Length Frequency Distribution

Length frequency histogram of species sampled by year.

Site: 181

Species: Brown Trout



Site: 213

Species: Brown Trout

