

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Whitetail Creek, Lawrence County
09-0059-00
2014

Table 1. Population and Biomass Estimates for Whitetail Creek

Site Number: 50
Site Midpoint (Latitude, Longitude): 44.32465294, -103.79815239
Survey Completed by: Unknown Consultant Firm for mining
Stream Classification: BK2

Date Sampled: 08/20/2014
Site Length (m): 103
Mean Width (m): 2.1
Number of Pass: 3
Conductivity (umhos/cm):
pH:
Water Temperature (C):
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	49	49	51	49	2364	38	476	957	34.12	765	104.7	16.2
Brook Trout	>=200mm	2	2	2	2	96	10	19	39	8.87	31	208.0	103.0
Brook Trout	All	51	51	53	51	2461	48	495	997	42.99	797	108.8	19.6

Site Number: 50
Site Midpoint (Latitude, Longitude): 44.32465294, -103.79815239
Survey Completed by: South Dakota Game, Fish and Parks
Stream Classification: BK2

Date Sampled: 08/27/2014
Site Length (m): 100
Mean Width (m): 2.0
Number of Pass: 3
Conductivity (umhos/cm): 148
pH: 8.4
Water Temperature (C): 12.0
Voltage: 325

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	27	27	28	27	1350	36	270	547	31.81	434	99.7	26.4
Brook Trout	>=200mm	5	5	5	5	250	28	50	101	24.96	80	203.6	111.8
Brook Trout	All	32	32	33	32	1600	72	320	648	64.22	515	115.9	45.0

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 Whitetail Creek, 2004-2014

Site 50

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Aug 27, 2005	21	21-21	
	Jul 15, 2008	11	11-11	
	Aug 25, 2010	62	62-63	
	Aug 25, 2011	26	26-27	
	Aug 22, 2012	108	106-112	
	Aug 20, 2014	49	49-51	
	Aug 27, 2014	27	27-28	

Brook Trout >=200mm	Aug 27, 2005	1	1-1	BK3
	Aug 20, 2014	2	2-2	BK2
	Aug 27, 2014	5	5-5	BK2

Length Frequency Distribution

Length frequency histogram of species sampled by year.

Site: 50

Species: Brook Trout



