

**SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY**  
**Silver Creek (Trib. of Castle), Pennington County**  
**10120110000150**  
**2014**

Table 1. Population and Biomass Estimates for Silver Creek (Trib. of Castle)

<b>Site Number:</b> 12	<b>Date Sampled:</b> 07/01/2014	<b>Conductivity (umhos/cm):</b> 420
<b>Site Midpoint (Latitude, Longitude):</b> 44.03001847, -103.85601516	<b>Site Length (m):</b> 100	<b>pH:</b>
<b>Survey Completed by:</b> South Dakota Game, Fish and Parks	<b>Mean Width (m):</b> 1.2	<b>Water Temperature (C):</b> 8.0
<b>Stream Classification:</b> BK0, RB0	<b>Number of Pass:</b> 1	<b>Voltage:</b> 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	10	10	10	10	821	12	100	332	10.51	161	99.3	14.3
Brook Trout	All	10	10	10	10	821	12	100	332	10.51	161	99.3	14.3
Rainbow Trout	<200mm	2	2	2	2	164	4	20	66	3.66	32	95.5	25.0
Rainbow Trout	All	2	2	2	2	164	4	20	66	3.66	32	95.5	25.0

<b>Site Number:</b> 22	<b>Date Sampled:</b> 06/18/2014	<b>Conductivity (umhos/cm):</b> 405
<b>Site Midpoint (Latitude, Longitude):</b> 44.03195306, -103.86743219	<b>Site Length (m):</b> 100	<b>pH:</b> 8.2
<b>Survey Completed by:</b> South Dakota Game, Fish and Parks	<b>Mean Width (m):</b> 2.2	<b>Water Temperature (C):</b> 10.0
<b>Stream Classification:</b> BK0	<b>Number of Pass:</b> 1	<b>Voltage:</b> 275

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	20	20	20	20	909	15	200	368	13.23	322	101.3	16.3
Brook Trout	All	20	20	20	20	909	15	200	368	13.23	322	101.3	16.3

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	
<b>Class BR1</b>	Number of wild Brown Trout exceeds 150 per acre
<b>Class BR2</b>	Number of wild Brook Trout ranges from 25 to 150 per acre
<b>Class BR3</b>	Number of wild Brown Trout is less than 25 per acre
<b>Class BK1</b>	Number of wild Brook Trout exceeds 150 per acre
<b>Class BK2</b>	Number of wild Brook Trout ranges from 25 to 150 per acre
<b>Class BK3</b>	Number of wild Brook Trout is less than 25 per acre
<b>Class RB1</b>	Number of wild Rainbow Trout exceeds 25 per acre
<b>Class RB2</b>	Number of wild Rainbow Trout is less than 25 per acre

Table 2. Species composition and population estimates on Silver Creek (Trib. of Castle), 2004-2014

**Site 12**

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jul 01, 2014	10	10-10	
Rainbow Trout <200mm	Jul 01, 2014	2	2-2	

**Site 22**

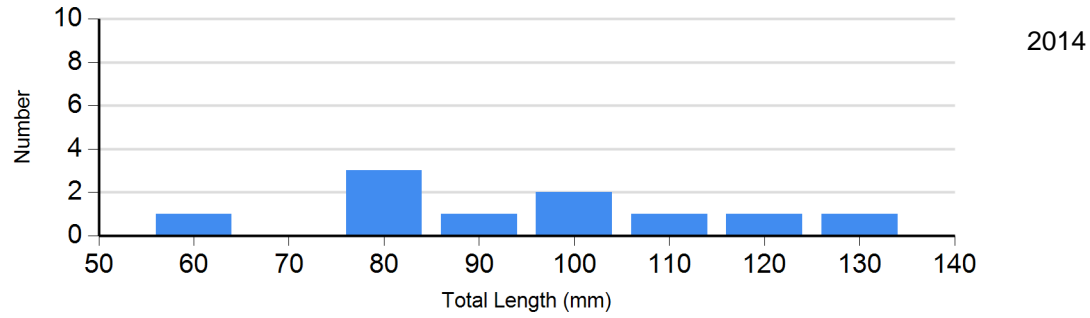
Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	May 30, 2008	32	32-32	
	Jun 18, 2014	20	20-20	
Brook Trout >=200mm	May 30, 2008	1	1-1	BK3

## Length Frequency Distribution

Length frequency histogram of species sampled by year.

**Site:** 12

**Species:** Brook Trout



**Site:** 22

**Species:** Brook Trout

