

**SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY**  
**Little Spearfish Creek, Lawrence County**  
**09-0017-00**  
**2008**

Table 1. Population and Biomass Estimates for Little Spearfish Creek

<b>Site Number:</b> 22	<b>Date Sampled:</b> 07/08/2008	<b>Conductivity (umhos/cm):</b> 450
<b>Site Midpoint (Latitude, Longitude):</b> 44.35063051, -103.94600907	<b>Site Length (m):</b> 66	<b>pH:</b> 8.4
<b>Survey Completed by:</b> South Dakota Game, Fish and Parks	<b>Mean Width (m):</b> 4.9	<b>Water Temperature (C):</b> 10.9
<b>Stream Classification:</b> BR1	<b>Number of Pass:</b> 1	<b>Voltage:</b>

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	82	82	82	82	1669	61	1242	676	54.59	1999	133.8	36.6
Brown Trout	>=200mm	30	30	30	30	611	77	455	247	68.59	731	229.7	125.8
Brown Trout	All	112	112	112	112	2280	148	1697	923	131.89	2730	159.5	64.8

<b>Site Number:</b> 92	<b>Date Sampled:</b> 07/08/2008	<b>Conductivity (umhos/cm):</b> 440
<b>Site Midpoint (Latitude, Longitude):</b> 44.32643606, -103.99361284	<b>Site Length (m):</b> 100	<b>pH:</b> 8.5
<b>Survey Completed by:</b> South Dakota Game, Fish and Parks	<b>Mean Width (m):</b> 3.0	<b>Water Temperature (C):</b> 13.2
<b>Stream Classification:</b> BR1	<b>Number of Pass:</b> 1	<b>Voltage:</b> 350

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	58	58	58	58	1963	75	580	795	67.01	933	146.4	38.2
Brown Trout	>=200mm	20	20	20	20	677	94	200	274	83.77	322	239.4	138.6
Brown Trout	All	78	78	78	78	2640	170	780	1069	151.56	1255	170.2	64.3

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 Little Spearfish Creek, 1998-2008

**Site 22**

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brown Trout <200mm	Jul 08, 2008	82	82-82	
Brown Trout >=200mm	Jul 08, 2008	30	30-30	BR1

**Site 92**

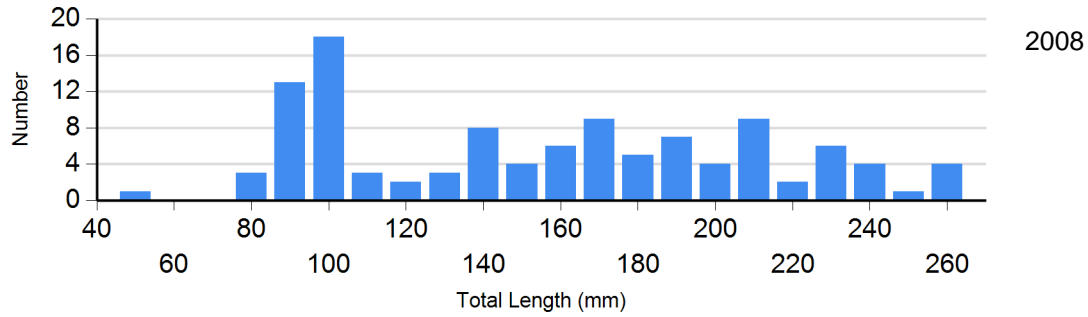
Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brown Trout <200mm	Aug 31, 2006	6	5-13	
	Jul 08, 2008	58	58-58	
Brown Trout >=200mm	Aug 31, 2006	16	16-18	BR1
	Jul 08, 2008	20	20-20	BR1

## Length Frequency Distribution

Length frequency histogram of species sampled by year.

**Site:** 22

**Species:** Brown Trout



**Site:** 92

**Species:** Brown Trout

