

**SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY**  
**Spearfish Creek, Lawrence County**  
**09-0021-00**  
**2015**

Table 1. Population and Biomass Estimates for Spearfish Creek

<b>Site Number:</b> 340	<b>Date Sampled:</b> 10/21/2015	<b>Conductivity (umhos/cm):</b> 442
<b>Site Midpoint (Latitude, Longitude):</b> 44.40182261, -103.89476328	<b>Site Length (m):</b> 100	<b>pH:</b> 7.2
<b>Survey Completed by:</b>	<b>Mean Width (m):</b> 10.0	<b>Water Temperature (C):</b> 8.0
<b>Stream Classification:</b> BR1, RB1	<b>Number of Pass:</b> 3	<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	64	84	112	64	838	40	840	340	35.76	1352	142.5	47.8
Brown Trout	>=200mm	44	47	53	44	469	79	470	190	70.36	756	247.5	168.0
Brown Trout	All	108	128	149	108	1278	135	1280	517	120.80	2060	185.3	105.9
Rainbow Trout	<200mm	35	46	67	35	459	18	460	186	16.02	740	117.8	39.1
Rainbow Trout	>=200mm	14	14	16	14	140	25	140	57	22.52	225	252.4	180.5
Rainbow Trout	All	49	58	72	49	579	54	580	234	47.86	933	156.3	92.6

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 Spearfish Creek, 2005-2015

**Site 340**

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brown Trout <200mm	Sep 11, 2006	54	54-56	
	Sep 18, 2007	78	69-90	
	Sep 11, 2008	64	63-67	
	Jul 27, 2011	52	48-59	
	Jul 30, 2012	85	73-100	
	Jul 24, 2013	39	34-49	
	Oct 21, 2015	84	64-112	

Brown Trout >=200mm	Sep 11, 2006	34	34-35	BR1
	Sep 18, 2007	35	35-36	BR1
	Sep 11, 2008	34	34-36	BR2
	Jul 27, 2011	33	31-38	BR2
	Jul 30, 2012	45	44-48	BR1
	Jul 24, 2013	44	42-49	BR1
	Oct 21, 2015	47	44-53	BR1
Rainbow Trout <200mm	Sep 11, 2006	114	113-117	
	Sep 18, 2007	89	86-94	
	Sep 11, 2008	38	30-55	
	Jul 27, 2011	49	34-79	
	Jul 30, 2012	75	74-78	
	Jul 24, 2013	44	41-50	
	Oct 21, 2015	46	35-67	
Rainbow Trout >=200mm	Sep 11, 2006	8	8-10	RB1
	Sep 18, 2007	20	20-20	RB1

Rainbow Trout >=200mm	Sep 11, 2008	63	19-310	RB1
	Jul 27, 2011	4	4-4	RB2
	Jul 30, 2012	22	21-26	RB1
	Jul 24, 2013	14	14-16	RB1
	Oct 21, 2015	14	14-16	RB1

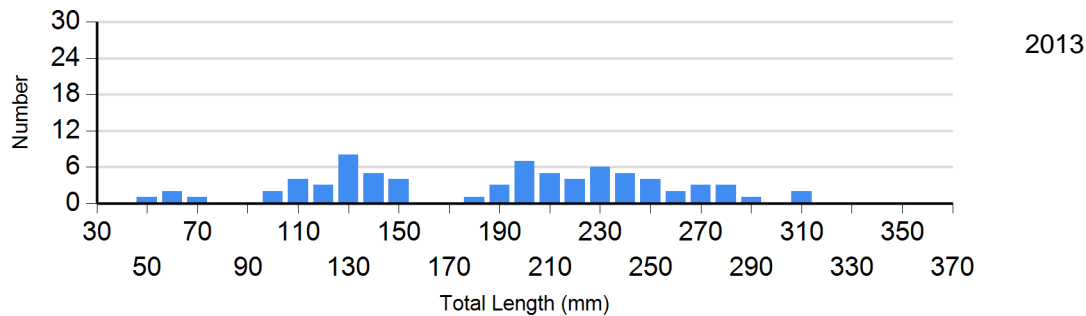
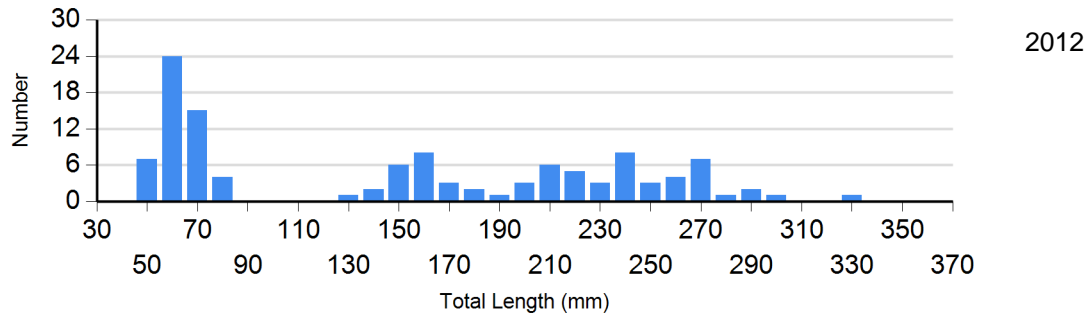
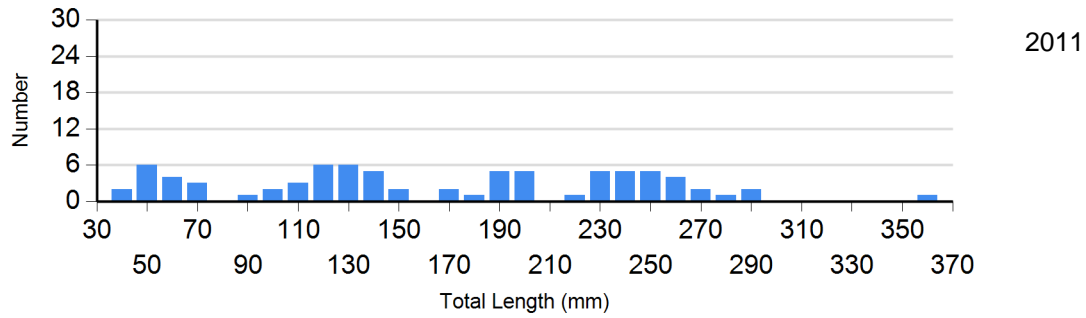
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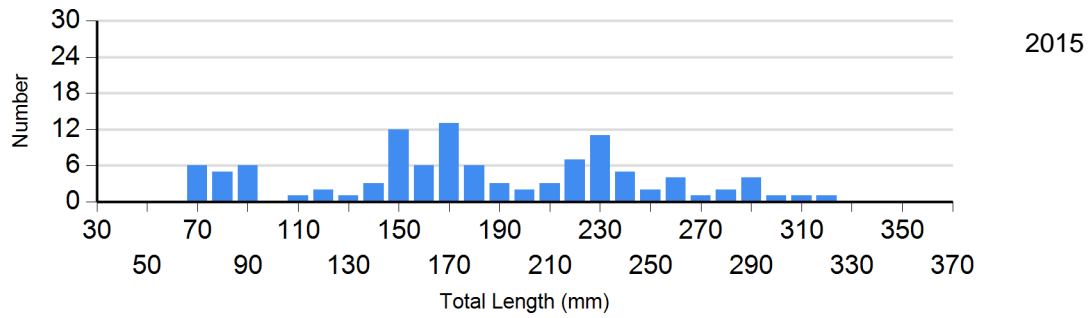
## Length Frequency Distribution

Length frequency histogram of species sampled by year.

**Site:** 340

**Species:** Brown Trout





**Site:** 340  
**Species:** Rainbow Trout

