

**SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY**  
**Jim Creek, Lawrence County**  
**09-0067-00**  
**2016**

Table 1. Population and Biomass Estimates for Jim Creek

<b>Site Number:</b> 44	<b>Date Sampled:</b> 07/07/2016	<b>Conductivity (umhos/cm):</b> 163
<b>Site Midpoint (Latitude, Longitude):</b> 44.14568942, -103.50326089	<b>Site Length (m):</b> 100	<b>pH:</b> 7.3
<b>Survey Completed by:</b> South Dakota Game, Fish and Parks	<b>Mean Width (m):</b> 2.5	<b>Water Temperature (C):</b> 15.6
<b>Stream Classification:</b> BK3, BR0	<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)
Brook Trout	<200mm	258	269	279	259	10879	281	2690	4406	251.06	4328	106.8	25.8
Brook Trout	>=200mm	1	1	1	1	40	4	10	16	3.50	16	214.0	97.0
Brook Trout	All	259	270	280	260	10919	287	2700	4422	256.38	4344	107.2	26.3
Brown Trout	<200mm	27	27	28	27	1092	33	270	442	29.64	434	82.5	30.4
Brown Trout	All	27	27	28	27	1092	33	270	442	29.64	434	82.5	30.4
Longnose Dace	All	5	5	7	5	202	3	50	82	2.44	80	90.2	13.5
Mountain Sucker	All	2	2	4	2	81	1	20	33	1.08	32	120.0	15.0

<b>Site Number:</b> 105	<b>Date Sampled:</b> 07/07/2016	<b>Conductivity (umhos/cm):</b> 153
<b>Site Midpoint (Latitude, Longitude):</b> 44.14548613, -103.55011650	<b>Site Length (m):</b> 100	<b>pH:</b> 7.5
<b>Survey Completed by:</b> South Dakota Game, Fish and Parks	<b>Mean Width (m):</b> 1.5	<b>Water Temperature (C):</b> 61.5
<b>Stream Classification:</b> BK1	<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)
Brook Trout	<200mm	146	147	150	146	9800	327	1470	3969	291.58	2365	139.7	33.3

Brook Trout	>=200mm	12	12	13	12	800	95	120	324	84.70	193	219.3	118.6
Brook Trout	All	158	159	162	158	10600	430	1590	4293	383.58	2558	145.8	40.5
Longnose Dace	All	42	42	43	42	2800	30	420	1134	26.50	676	106.1	10.6
Mountain Sucker	All	3	3	4	3	200	4	30	81	3.93	48	128.7	22.0
White Sucker	All	3	3	5	3	200	5	30	81	4.29	48	132.7	24.0

---

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	
<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 Jim Creek, 2006-2016

**Site 44**

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jun 23, 2008	26	26-26	
	Jun 10, 2014	124	84-175	
	Jul 07, 2016	269	259-279	
Brook Trout >=200mm	Jul 07, 2016	1	1-1	BK3
Brown Trout <200mm	Jul 07, 2016	27	27-28	
Longnose Dace	Jun 10, 2014	1	1-5	
	Jul 07, 2016	5	5-7	

Mountain Sucker

Jul 07, 2016

2

2-4

---

**Site 105**

---

<b>Species/Size</b>	<b>Date</b>	<b>Pop Est.</b>	<b>(95% C.I.)</b>	<b>Stream Classification</b>
Brook Trout <200mm	Jun 23, 2008	9	9-9	
	Jun 10, 2014	3	3-4	
	Jul 07, 2016	147	146-150	
Brook Trout >=200mm	Jun 23, 2008	1	1-1	BK3
	Jun 10, 2014	1	1-1	BK3
	Jul 07, 2016	12	12-13	BK1
Brown Trout <200mm	Jun 10, 2014	1	1-1	
Longnose Dace	Jul 07, 2016	42	42-43	
Mountain Sucker	Jul 07, 2016	3	3-4	
White Sucker	Jul 07, 2016	3	3-5	

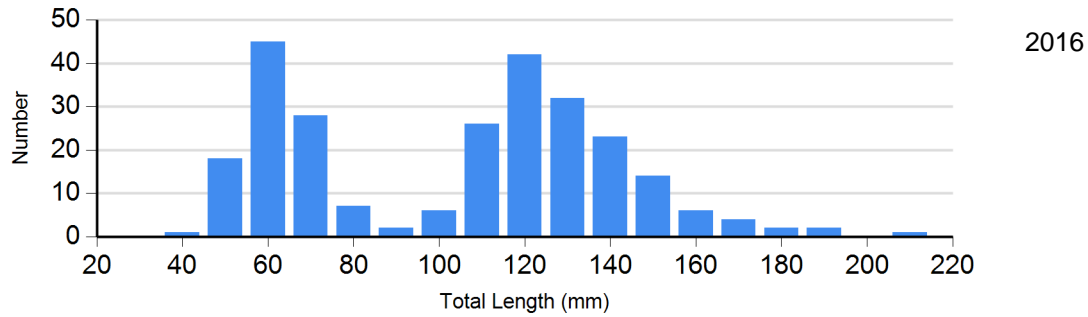
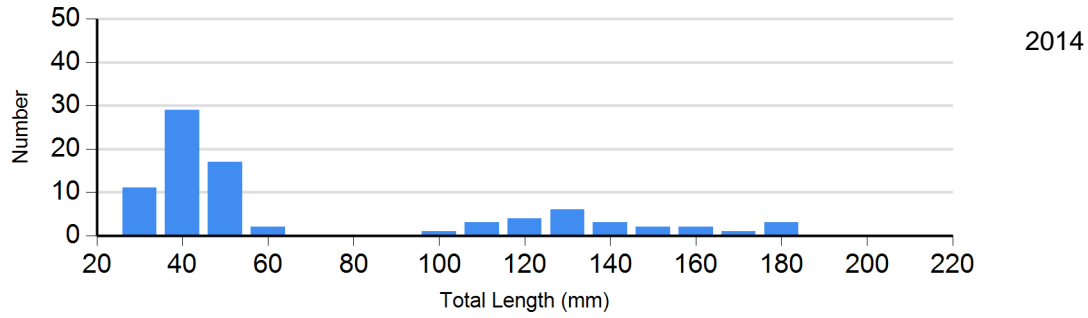
---

## Length Frequency Distribution

Length frequency histogram of species sampled by year.

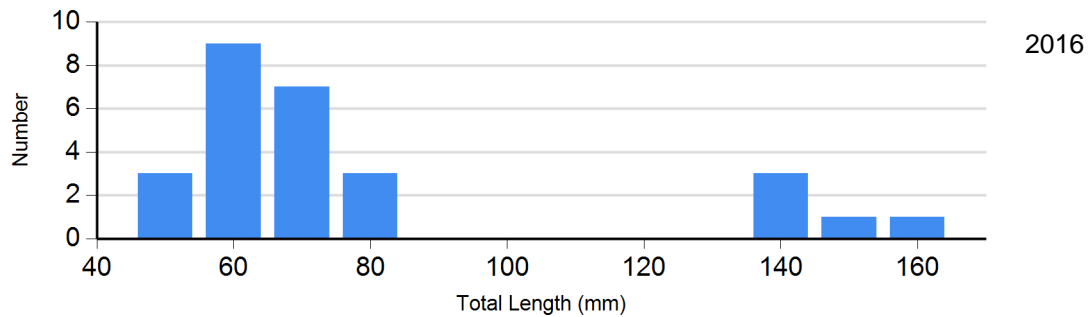
**Site:** 44

**Species:** Brook Trout

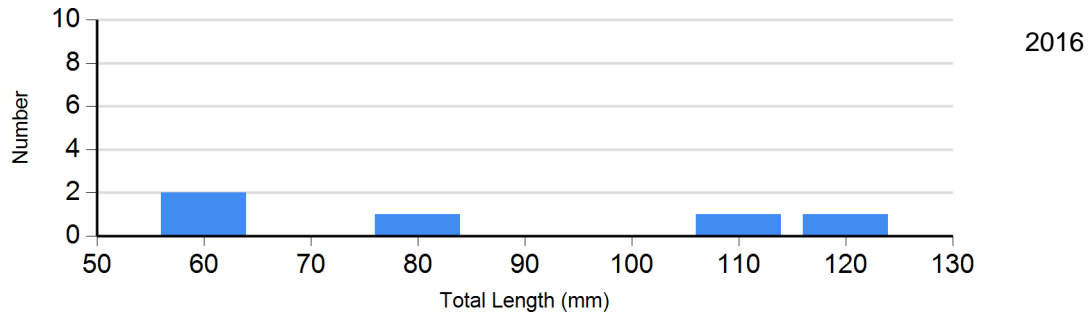


**Site:** 44

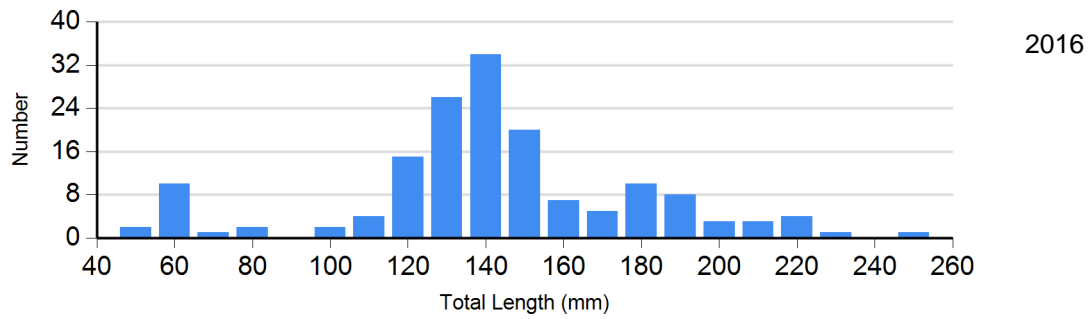
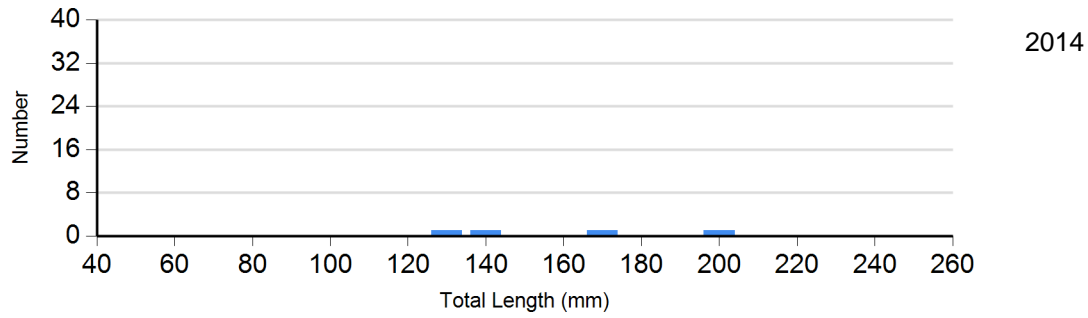
**Species:** Brown Trout



**Site:** 44  
**Species:** Longnose Dace



**Site:** 105  
**Species:** Brook Trout



Site: 105  
Species: Longnose Dace

