

**SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY**  
**Slate Creek, Pennington County**  
**02-0074-00**  
**2017**

Table 1. Population and Biomass Estimates for Slate Creek

<b>Site Number:</b> 135	<b>Date Sampled:</b> 06/13/2017	<b>Conductivity (umhos/cm):</b>
<b>Site Midpoint (Latitude, Longitude):</b> 44.03212241, -103.63386714	<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> 3.1	<b>Water Temperature (C):</b> 7.0
<b>Stream Classification:</b> BK2, 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	3	3	3	3	98	4	30	40	3.89	48	145.7	44.3
Brook Trout	>=200mm	4	4	4	4	131	15	40	53	13.45	64	206.8	115.0
Brook Trout	All	7	7	7	7	229	19	70	93	17.33	113	180.6	84.7
Brown Trout	<200mm	3	3	4	3	98	5	30	40	4.38	48	151.0	50.0
Brown Trout	All	3	3	4	3	98	5	30	40	4.38	48	151.0	50.0
Creek Chub	All	49	51	56	49	1670	54	510	676	48.18	821	102.2	32.3
Mountain Sucker	All	1	1	1	1	33	1	10	13	0.61	16	119.0	21.0
White Sucker	All	11	11	11	11	360	17	110	146	15.19	177	117.8	47.3

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<b>Site Number:</b> 193	<b>Date Sampled:</b> 08/21/2017	<b>Conductivity (umhos/cm):</b>
<b>Site Midpoint (Latitude, Longitude):</b> 44.01787210, -103.65255431	<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> 1.3	<b>Water Temperature (C):</b>
<b>Stream Classification:</b> BK2, 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	13	13	13	13	986	41	130	399	36.92	209	154.9	41.9
Brook Trout	>=200mm	1	1	1	1	76	9	10	31	8.40	16	223.0	124.0
Brook Trout	All	14	14	14	14	1062	51	140	430	45.31	225	159.8	47.8
Brown Trout	<200mm	4	4	5	4	303	16	40	123	14.56	64	177.5	53.8
Brown Trout	All	4	4	5	4	303	16	40	123	14.56	64	177.5	53.8

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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 Slate Creek, 2007-2017

**Site 135**

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jun 13, 2017	3	3-3	
Brook Trout >=200mm	Jun 13, 2017	4	4-4	BK2
Brown Trout <200mm	Jun 15, 2016	5	5-6	
	Jun 13, 2017	3	3-4	
Creek Chub	Jun 15, 2016	123	120-128	
	Jun 13, 2017	51	49-56	
Longnose Dace	Jun 15, 2016	240	226-254	

Mountain Sucker	Jun 13, 2017	1	1-1
White Sucker	Jun 15, 2016	7	7-9
	Jun 13, 2017	11	11-11

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**Site 193**


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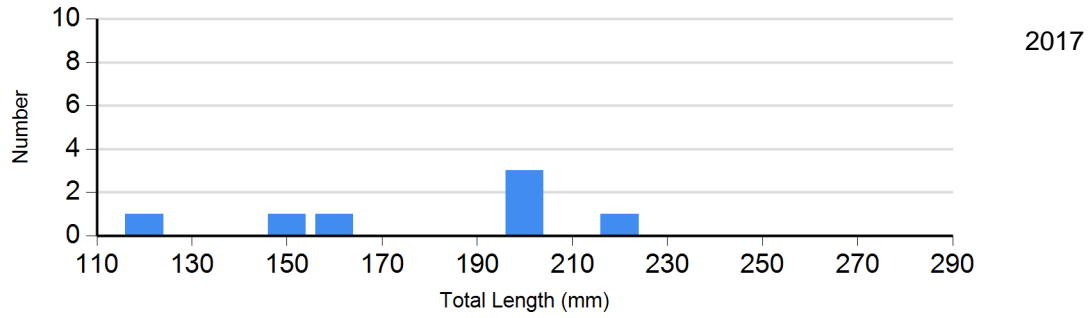
<b>Species/Size</b>	<b>Date</b>	<b>Pop Est.</b>	<b>(95% C.I.)</b>	<b>Stream Classification</b>
Brook Trout <200mm	Jul 02, 2008	5	5-5	
	Aug 04, 2015	201	198-206	
	Aug 21, 2017	13	13-13	
Brook Trout >=200mm	Aug 04, 2015	21	21-21	BK1
	Aug 21, 2017	1	1-1	BK2
Brown Trout <200mm	Aug 21, 2017	4	4-5	
Longnose Dace	Aug 04, 2015	23	23-25	
White Sucker	Jul 02, 2008	1	1-1	
	Aug 04, 2015	10	9-15	

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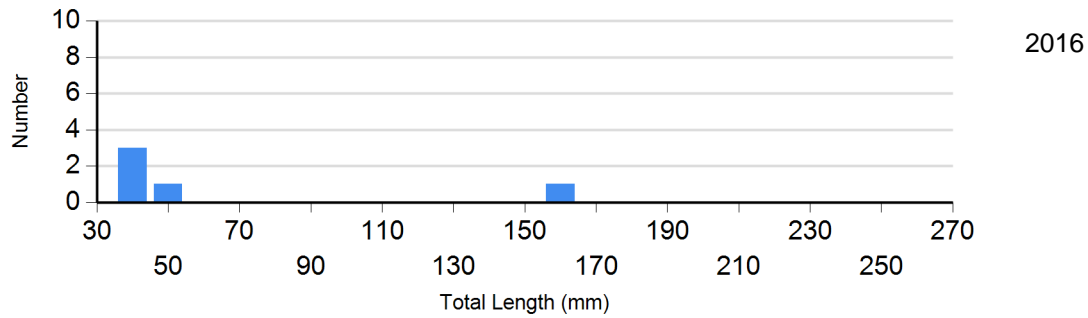
## Length Frequency Distribution

Length frequency histogram of species sampled by year.

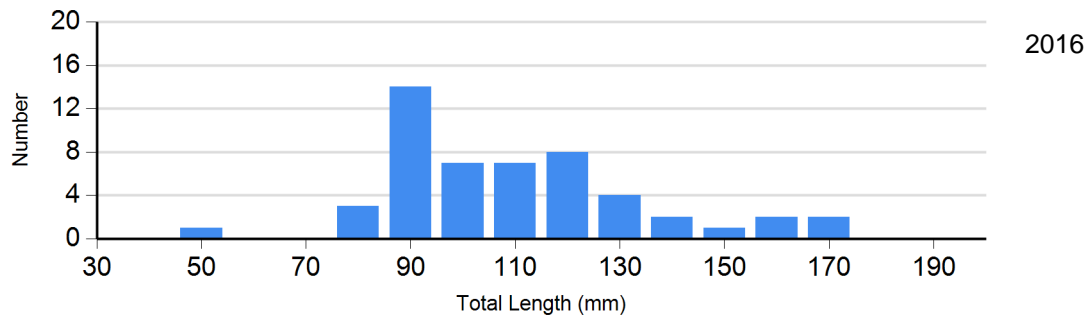
**Site:** 135  
**Species:** Brook Trout

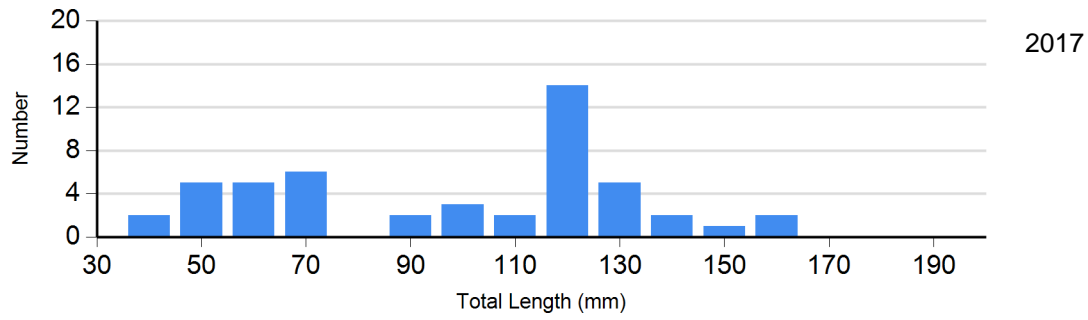


**Site:** 135  
**Species:** Brown Trout

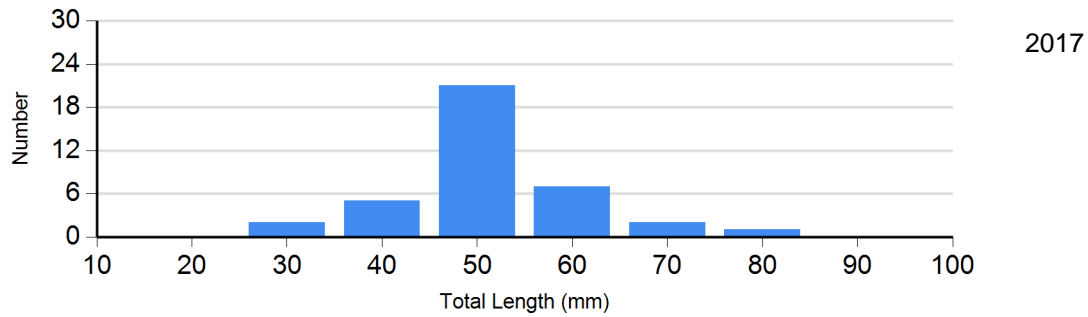
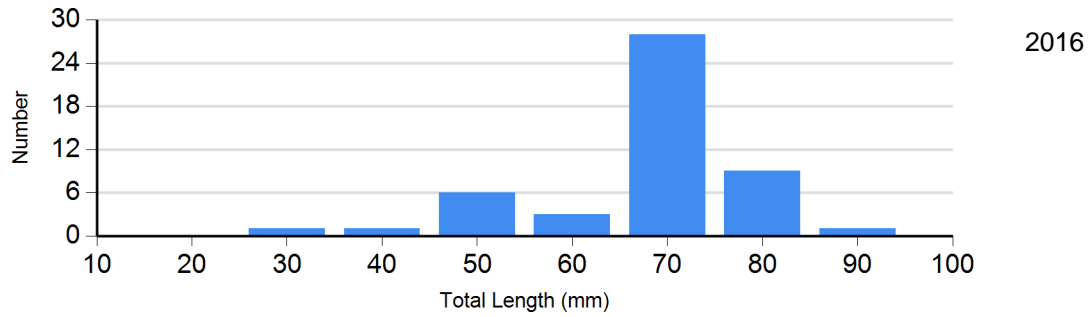


**Site:** 135  
**Species:** Creek Chub

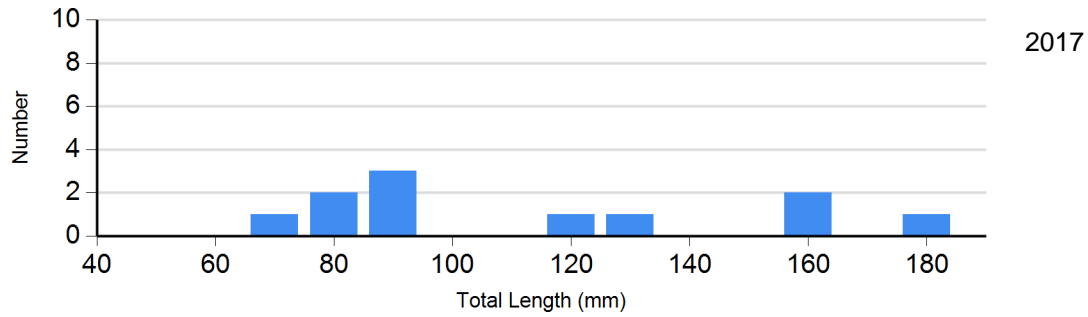
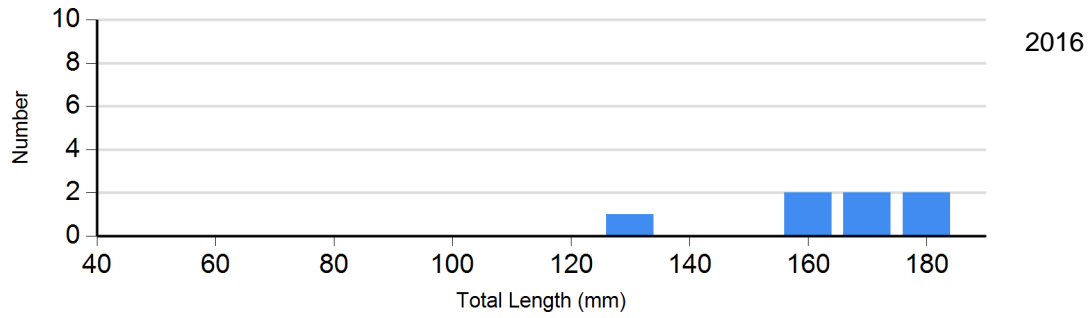




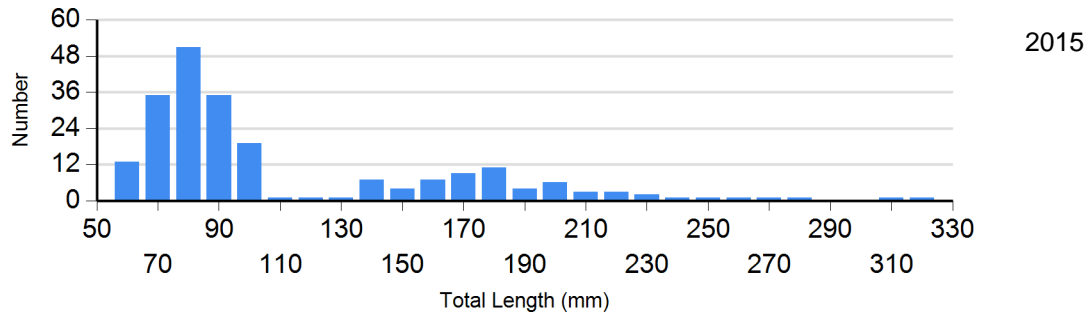
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**Species:** Longnose Dace

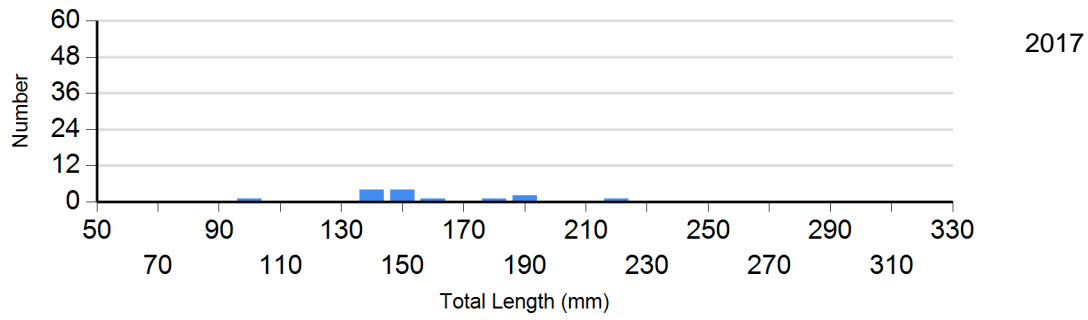


**Site:** 135  
**Species:** White Sucker

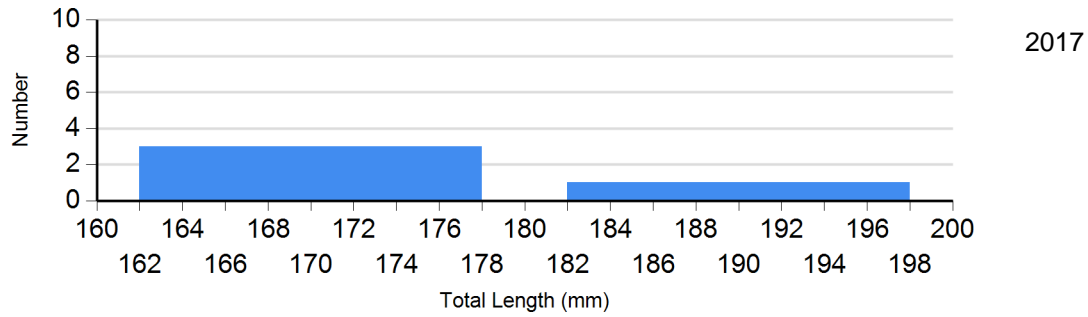


**Site:** 193  
**Species:** Brook Trout

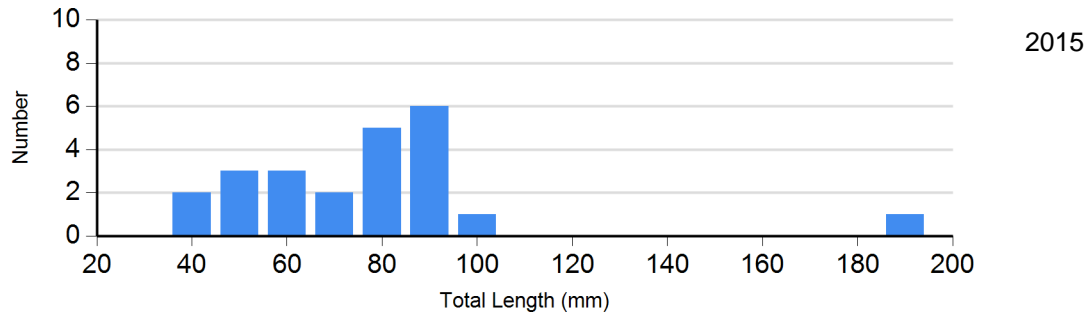




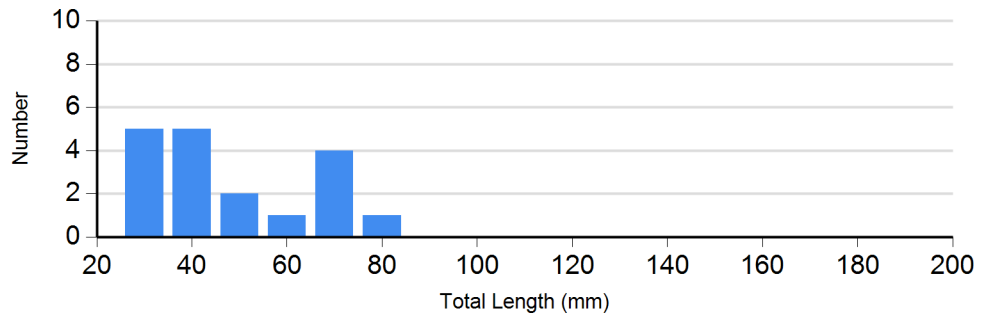
**Site:** 193  
**Species:** Brown Trout



**Site:** 193  
**Species:** Longnose Dace







**Site:** 193  
**Species:** White Sucker

