

**SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY**  
**Spring Creek (Trib. of Cheyenne), Pennington County**  
**02-0061-00**  
**2017**

Table 1. Population and Biomass Estimates for Spring Creek (Trib. of Cheyenne)

<b>Site Number:</b> 1885	<b>Date Sampled:</b> 06/27/2017	<b>Conductivity (umhos/cm):</b>
<b>Site Midpoint (Latitude, Longitude):</b> 43.98085728, -103.44241913	<b>Site Length (m):</b>	<b>pH:</b>
<b>Survey Completed by:</b> South Dakota Game, Fish and Parks	<b>Mean Width (m):</b> 9.1	<b>Water Temperature (C):</b>
<b>Stream Classification:</b> BR3, RB2	<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	12	14	21	12	0	0	0	0	0.00	0	281.3	235.8
Brown Trout	All	12	14	21	12	0	0	0	0	0.00	0	281.3	235.8
Creek Chub	All	300	359	395	323	0	0	0	0	0.00	0	82.7	88.8
Rainbow Trout	>=200mm	6	6	6	6	0	0	0	0	0.00	0	298.0	264.0
Rainbow Trout	All	6	6	6	6	0	0	0	0	0.00	0	298.0	264.0
Rock Bass	All	117	126	136	117	0	0	0	0	0.00	0	74.9	51.6
Smallmouth Bass	All	1	1	1	1	0	0	0	0	0.00	0	115.0	19.0
White Sucker	All	101	101	103	101	0	0	0	0	0.00	0	200.7	143.8

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<b>Site Number:</b> 1994	<b>Date Sampled:</b> 08/15/2017	<b>Conductivity (umhos/cm):</b>
<b>Site Midpoint (Latitude, Longitude):</b> 43.94382220, -103.51348180	<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> 0.0	<b>Water Temperature (C):</b>
<b>Stream Classification:</b> BR3, RB2	<b>Number of Pass:</b> 3	<b>Voltage:</b> 250

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	2	2	2	2	0	0	20	0	0.00	32	353.0	437.5
Brown Trout	All	2	2	2	2	0	0	20	0	0.00	32	353.0	437.5
Creek Chub	All	78	130	205	78	0	0	1300	0	0.00	2092	85.7	18.5
Mountain Sucker	All	1	1	5	1	0	0	10	0	0.00	16	119.0	17.0
Rainbow Trout	>=200mm	1	1	2	1	0	0	10	0	0.00	16	235.0	133.0
Rainbow Trout	All	1	1	2	1	0	0	10	0	0.00	16	235.0	133.0
Rock Bass	All	26	27	30	26	0	0	270	0	0.00	434	73.6	20.0
White Sucker	All	290	307	320	294	0	0	3070	0	0.00	4940	111.0	20.8

Site Number: 2439

Site Midpoint (Latitude, Longitude): 43.90537261, -103.74603404

Survey Completed by: South Dakota Game, Fish and Parks

Stream Classification: BK0

Date Sampled: 08/09/2017

Site Length (m): 100

Mean Width (m): 1.2

Number of Pass: 3

Conductivity (umhos/cm):

pH:

Water Temperature (C):

Voltage:

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	98	102	108	98	8835	183	1020	3578	163.83	1641	97.4	20.8
Brook Trout	All	100	106	114	100	9181	191	1060	3718	170.26	1706	97.4	20.8

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 Spring Creek (Trib. of Cheyenne), 2007-2017

**Site 1885**

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brown Trout >=200mm	Aug 16, 2011	18	18-18	BR2
	Jun 27, 2017	14	12-21	BR3
Creek Chub	Jul 24, 2009	35	35-35	
	Jun 27, 2017	359	323-395	
Rainbow Trout <200mm	Aug 16, 2011	9	9-10	
Rainbow Trout >=200mm	Jul 24, 2009	3	3-3	RB2
	Jun 27, 2017	6	6-6	RB2

Rock Bass	Jul 24, 2009	1	1-1
	Jun 27, 2017	126	117-136
Smallmouth Bass	Jun 27, 2017	1	1-1
White Sucker	Jul 24, 2009	30	30-30
	Aug 16, 2011	41	40-45
	Jun 27, 2017	101	101-103

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**Site 1994**

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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	Oct 14, 2015	1	1-2	BK3
Brown Trout >=200mm	Oct 14, 2015	3	3-4	BR2
	Jun 27, 2016	1	1-2	BR3
	Aug 15, 2017	2	2-2	BR3
Creek Chub	Oct 14, 2015	25	25-26	
	Aug 15, 2017	130	78-205	
Longnose Dace	Jun 27, 2016	21	16-36	
Mountain Sucker	Aug 15, 2017	1	1-5	

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Rainbow Trout >=200mm	Oct 14, 2015	4	4-4	RB1
	Aug 15, 2017	1	1-2	RB2
Rock Bass	Oct 14, 2015	8	8-10	
	Jun 27, 2016	3	3-4	
	Aug 15, 2017	27	26-30	
White Sucker	Jun 27, 2016	10	9-15	
	Aug 15, 2017	307	294-320	

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**Site 2439**

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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 27, 2009	7	7-7	
	Jun 23, 2014	25	25-25	
	Jun 22, 2016	47	47-48	
	Aug 09, 2017	102	98-108	
Brook Trout >=200mm	Jun 23, 2014	1	1-1	BK2
	Jun 22, 2016	3	3-3	BK2

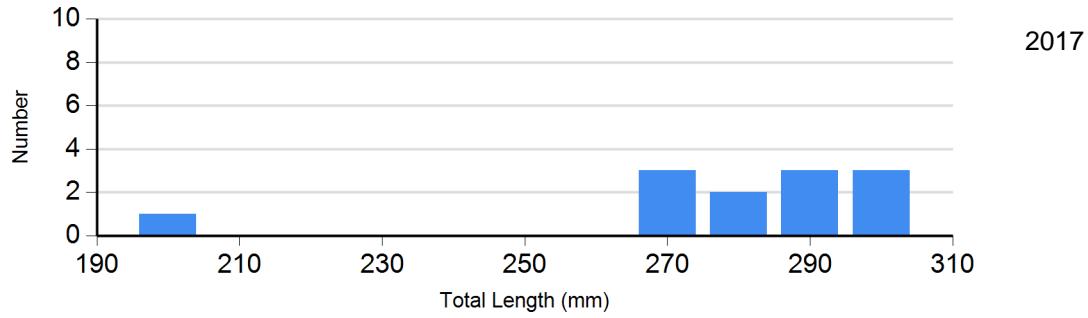
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## Length Frequency Distribution

Length frequency histogram of species sampled by year.

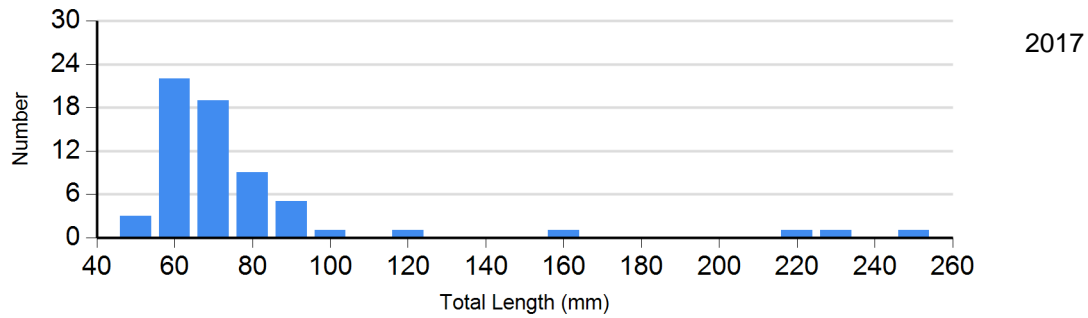
**Site:** 1885

**Species:** Brown Trout



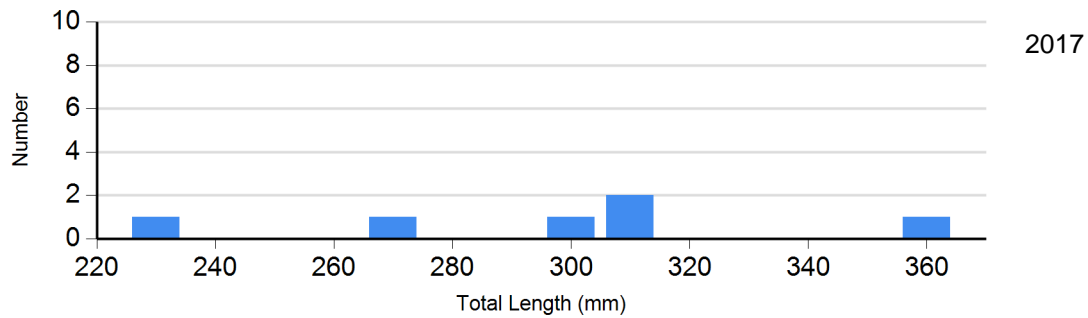
**Site:** 1885

**Species:** Creek Chub

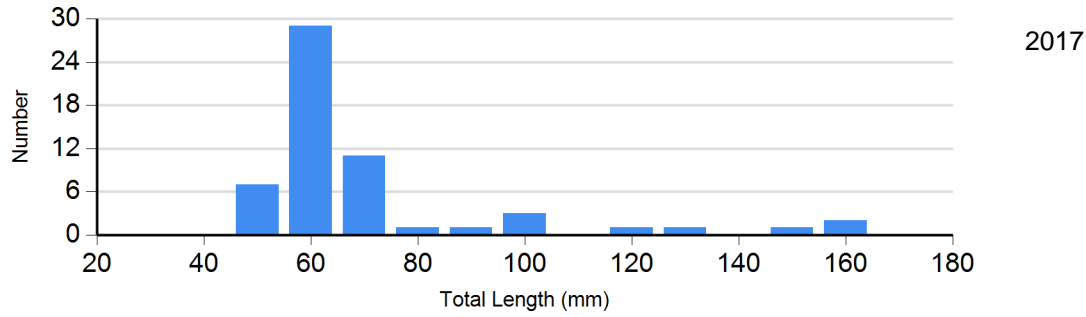


**Site:** 1885

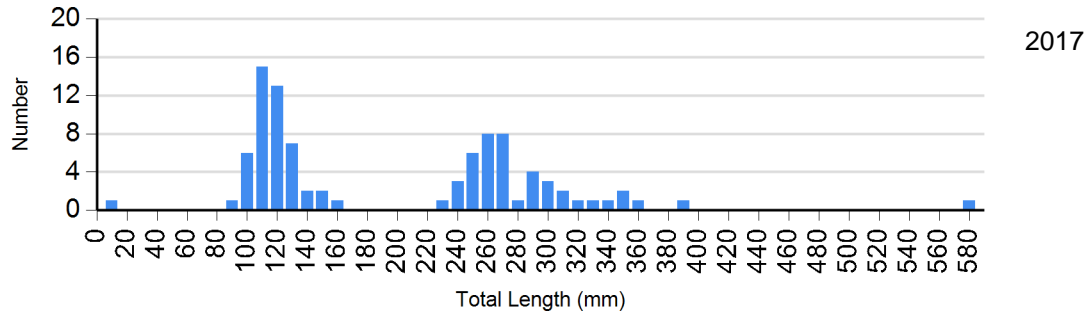
**Species:** Rainbow Trout



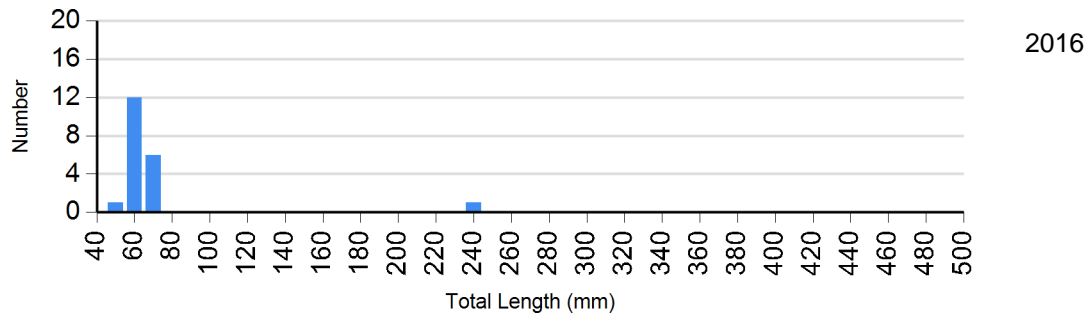
**Site:** 1885  
**Species:** Rock Bass



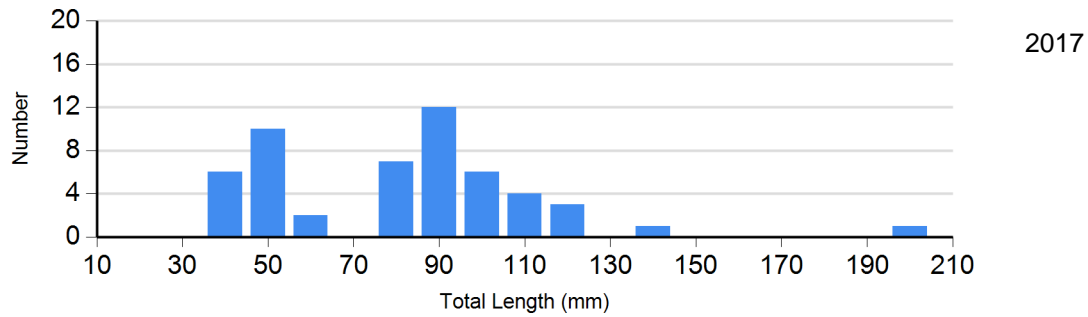
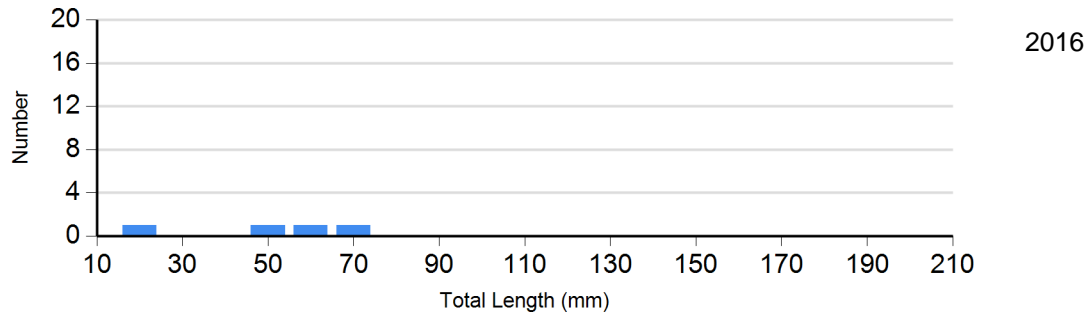
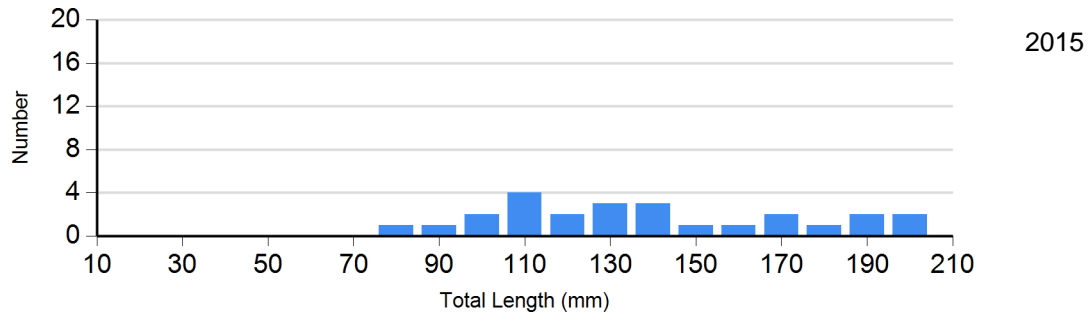
**Site:** 1885  
**Species:** White Sucker



**Site:** 1994  
**Species:** Brown Trout

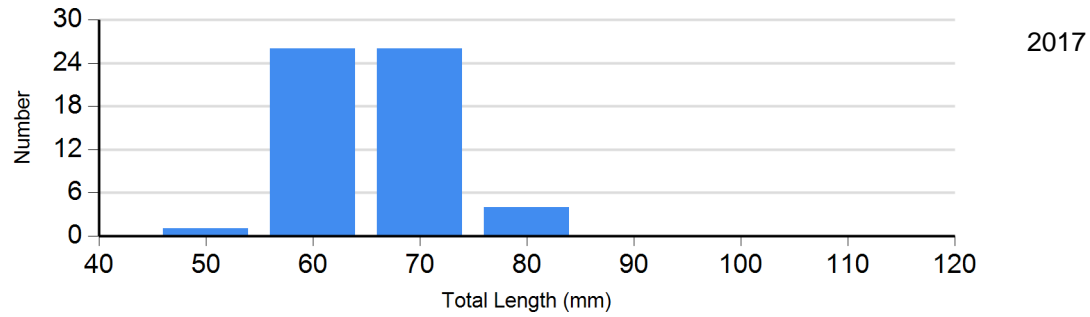
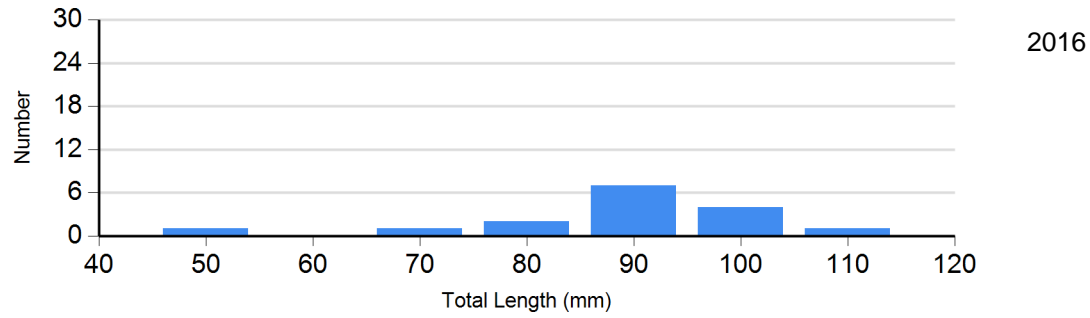


Site: 1994  
Species: Creek Chub

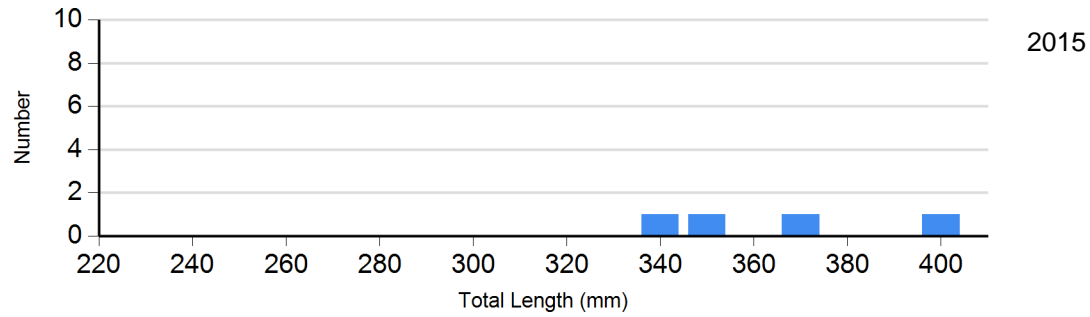




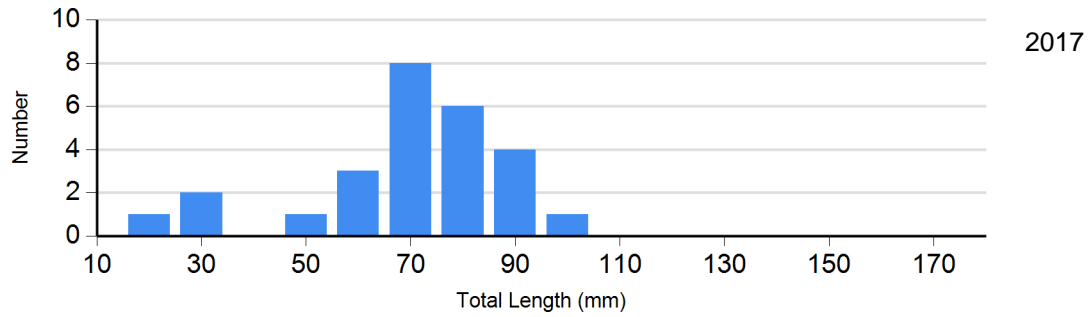
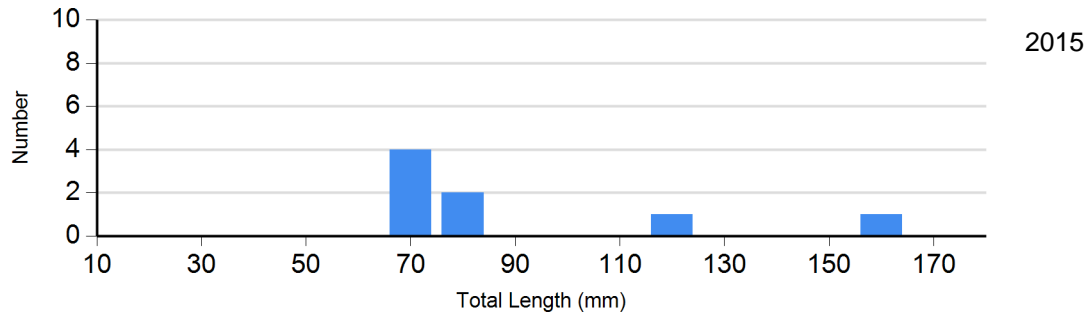
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**Species:** Longnose Dace



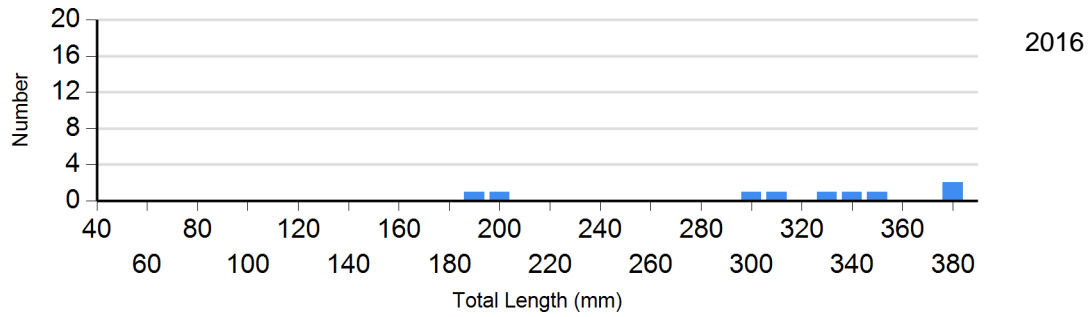
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**Species:** Rainbow Trout

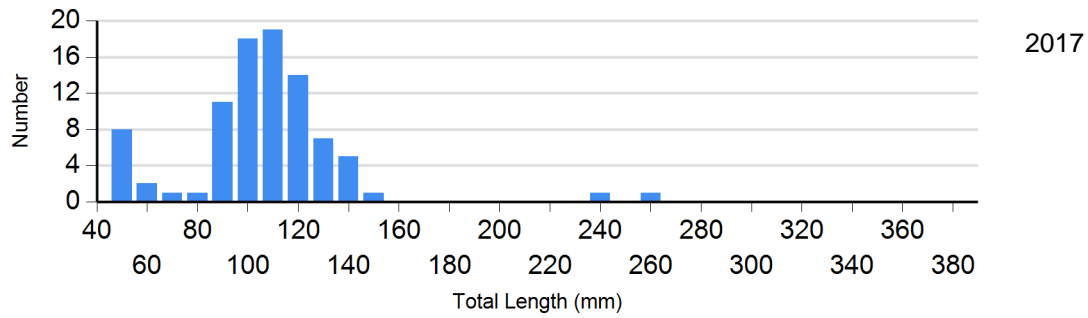


**Site:** 1994  
**Species:** Rock Bass



**Site:** 1994  
**Species:** White Sucker





Site: 2439  
Species: Brook Trout

