

**SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY**  
**French Creek, Custer County**  
**21-0017-00**  
**2015**

Table 1. Population and Biomass Estimates for French Creek

<b>Site Number:</b> 875	<b>Date Sampled:</b> 09/11/2015	<b>Conductivity (umhos/cm):</b>
<b>Site Midpoint (Latitude, Longitude):</b> 43.71839672, -103.36797411	<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> 10.3	<b>Water Temperature (C):</b>
<b>Stream Classification:</b> BR2, RB2	<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	19	19	19	19	185	9	190	75	7.80	306	141.3	47.2
Brown Trout	>=200mm	16	16	16	16	156	37	160	63	32.65	257	275.1	234.4
Brown Trout	All	35	35	35	35	341	51	350	138	45.85	563	202.5	150.4
Creek Chub	All	12	12	12	12	117	2	120	47	2.09	193	102.0	20.0
Longnose Dace	All	21	21	21	21	205	4	210	83	3.47	338	81.9	19.0
Rainbow Trout	>=200mm	2	2	2	2	20	8	20	8	7.17	32	350.0	412.0
Rainbow Trout	All	2	2	2	2	20	8	20	8	7.17	32	350.0	412.0
White Sucker	All	2	2	2	2	20	3	20	8	2.41	32	200.0	138.5

<b>Site Number:</b> 995	<b>Date Sampled:</b> 08/11/2015	<b>Conductivity (umhos/cm):</b>
<b>Site Midpoint (Latitude, Longitude):</b> 43.72722249, -103.43860513	<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> 6.9	<b>Water Temperature (C):</b>
<b>Stream Classification:</b> BR2	<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	14	14	14	14	202	12	140	82	10.63	225	162.6	58.8
Brown Trout	>=200mm	13	13	13	13	188	37	130	76	33.23	209	266.2	198.1
Brown Trout	All	27	27	27	27	390	51	270	158	45.73	434	212.5	131.2
Creek Chub	All	15	15	16	15	217	8	150	88	7.07	241	148.4	36.5
Smallmouth Bass	All	4	4	4	4	58	13	40	23	11.27	64	243.3	218.3
White Sucker	All	55	55	55	55	795	94	550	322	84.06	885	214.4	118.4

Site Number: 996

Site Midpoint (Latitude, Longitude): 43.72794426, -103.43937761

Survey Completed by: South Dakota Game, Fish and Parks

Stream Classification: BR2

Date Sampled: 08/11/2015

Site Length (m): 100

Mean Width (m): 6.9

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)
Brown Trout	<200mm	14	14	14	14	202	12	140	82	10.56	225	164.5	58.4
Brown Trout	>=200mm	13	13	13	13	188	39	130	76	34.39	209	266.6	205.0
Brown Trout	All	27	27	27	27	390	53	270	158	46.92	434	213.7	134.6
Creek Chub	All	15	15	16	15	217	8	150	88	7.07	241	148.5	36.5
Smallmouth Bass	All	4	4	4	4	58	13	40	23	11.27	64	243.3	218.3
White Sucker	All	79	79	80	79	1142	135	790	462	120.96	1271	214.4	118.6

Site Number: 1129

Site Midpoint (Latitude, Longitude): 43.71790044, -103.48904117

Survey Completed by: South Dakota Game, Fish and Parks

Stream Classification: BK0, BR2, RB2

Date Sampled: 10/20/2015

Site Length (m): 100

Mean Width (m): 6.9

Number of Pass: 3

Conductivity (umhos/cm):

pH:

Water Temperature (C):

343

7.2

12.8

## 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	3	3	4	3	43	1	30	18	0.95	48	131.7	24.7
Brook Trout	All	3	3	4	3	43	1	30	18	0.95	48	131.7	24.7
Brown Trout	<200mm	49	49	51	49	706	16	490	286	14.14	788	125.6	22.4
Brown Trout	>=200mm	10	10	10	10	144	20	100	58	17.62	161	237.0	136.9
Brown Trout	All	59	59	61	59	851	37	590	344	33.43	949	144.5	44.0
Creek Chub	All	82	94	109	82	1355	36	940	549	32.07	1512	111.9	26.5
Longnose Dace	All	112	111	128	112	1600	17	1110	648	15.24	1786	84.8	10.7
Mountain Sucker	All	3	3	4	3	43	2	30	18	1.67	48	150.0	43.3
Rainbow Trout	>=200mm	3	3	3	3	43	9	30	18	7.84	48	291.3	203.0
Rainbow Trout	All	3	3	3	3	43	9	30	18	7.84	48	291.3	203.0
White Sucker	All	109	117	126	109	1687	176	1170	683	157.03	1883	185.1	104.3

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 French Creek, 2005-2015

**Site 875**

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brown Trout <200mm	May 28, 2009	12	12-12	
	Jul 02, 2013	49	49-51	
	Sep 11, 2015	19	19-19	
Brown Trout >=200mm	May 28, 2009	2	2-2	BR3
	Jul 02, 2013	11	11-12	BR2
	Sep 11, 2015	16	16-16	BR2
Creek Chub	Sep 11, 2015	12	12-12	

Longnose Dace	Sep 11, 2015	21	21-21	
Rainbow Trout <200mm	Jul 02, 2013	1	1-1	
Rainbow Trout >=200mm	May 28, 2009	1	1-1	RB2
	Sep 11, 2015	2	2-2	RB2
Smallmouth Bass	May 28, 2009	1	1-1	
White Sucker	May 28, 2009	2	2-2	
	Jul 02, 2013	11	11-11	
	Sep 11, 2015	2	2-2	

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**Site 995**

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<b>Species/Size</b>	<b>Date</b>	<b>Pop Est.</b>	<b>(95% C.I.)</b>	<b>Stream Classification</b>
Brown Trout <200mm	Jun 08, 2009	1	1-1	
	Aug 11, 2015	14	14-14	
Brown Trout >=200mm	Aug 11, 2015	13	13-13	BR2
Creek Chub	Aug 11, 2015	15	15-16	
Smallmouth Bass	Jun 08, 2009	1	1-1	
	Aug 11, 2015	4	4-4	

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White Sucker

Aug 11, 2015

55

55-55

**Site 996**

<b>Species/Size</b>	<b>Date</b>	<b>Pop Est.</b>	<b>(95% C.I.)</b>	<b>Stream Classification</b>
Brown Trout <200mm	Jun 26, 2013	2	2-4	
	Aug 11, 2015	14	14-14	
Brown Trout >=200mm	Jun 26, 2013	5	5-5	BR2
	Aug 11, 2015	13	13-13	BR2
Creek Chub	Jun 26, 2013	79	77-83	
	Aug 11, 2015	15	15-16	
Smallmouth Bass	Aug 11, 2015	4	4-4	
White Sucker	Jun 26, 2013	70	38-143	
	Aug 11, 2015	79	79-80	

**Site 1129**

<b>Species/Size</b>	<b>Date</b>	<b>Pop Est.</b>	<b>(95% C.I.)</b>	<b>Stream Classification</b>
Brook Trout <200mm	Oct 20, 2015	3	3-4	
Brown Trout <200mm	Jul 09, 2013	2	2-4	
	Oct 20, 2015	49	49-51	

Brown Trout >=200mm	Jul 09, 2013	5	5-6	BR2
	Oct 20, 2015	10	10-10	BR2
Creek Chub	Jul 09, 2013	92	89-97	
	Oct 20, 2015	94	82-109	
Longnose Dace	Oct 20, 2015	111	112-128	
Mountain Sucker	Jul 09, 2013	5	5-6	
	Oct 20, 2015	3	3-4	
Rainbow Trout >=200mm	Oct 20, 2015	3	3-3	RB2
White Sucker	Oct 20, 2015	117	109-126	

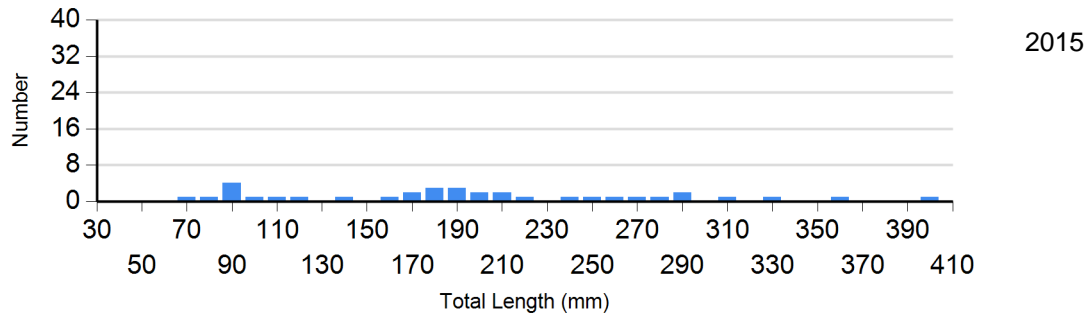
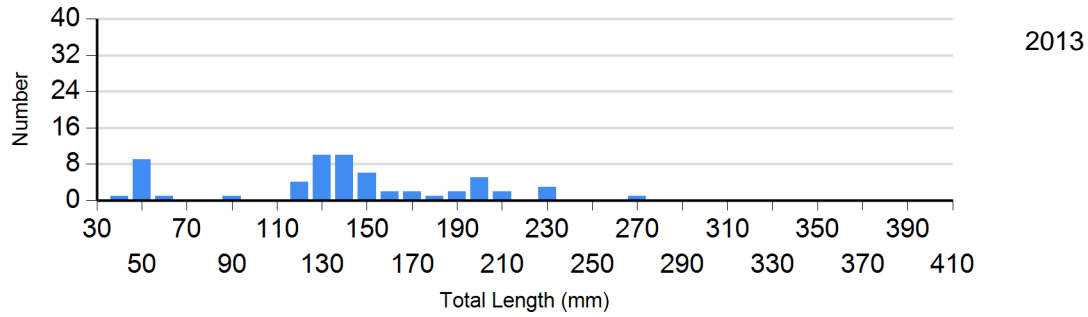
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## Length Frequency Distribution

Length frequency histogram of species sampled by year.

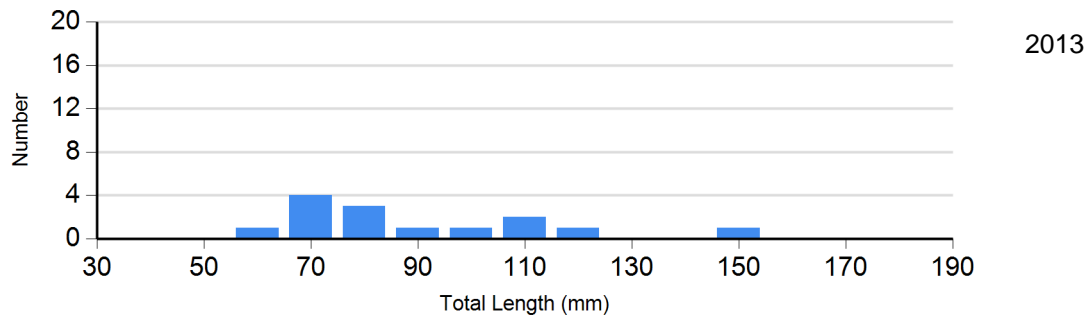
**Site:** 875

**Species:** Brown Trout

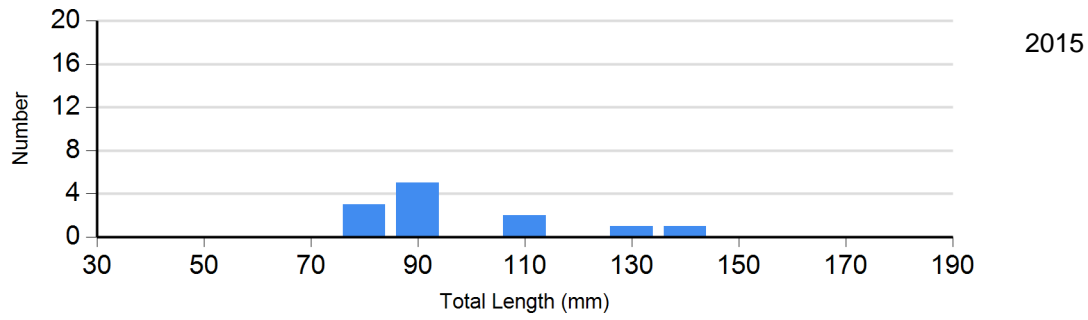


**Site:** 875

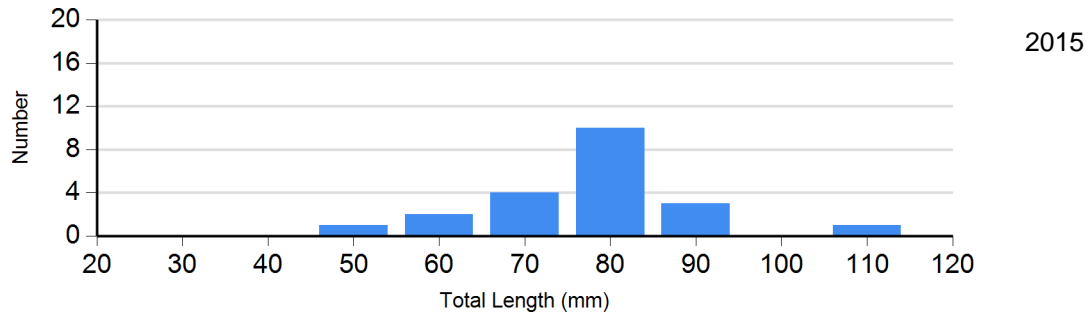
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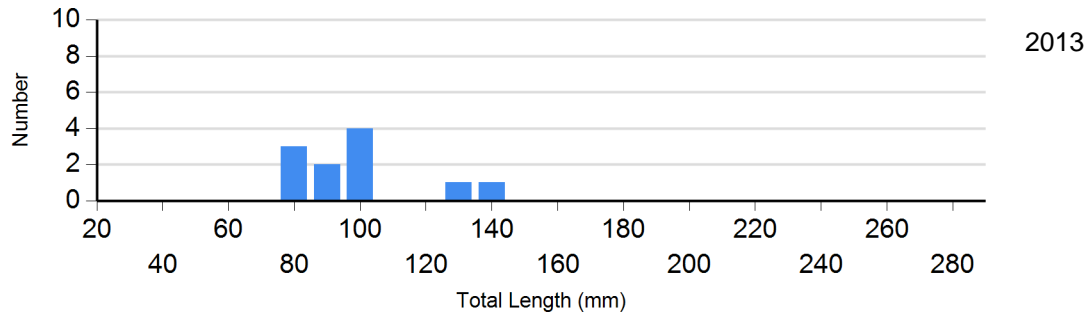




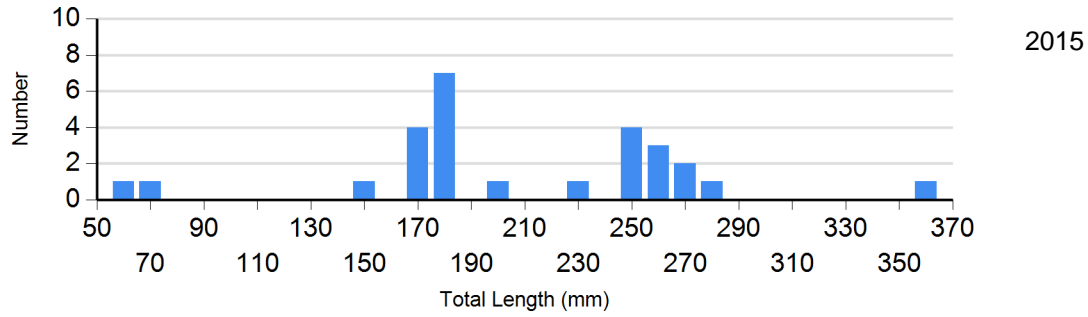
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**Species:** Longnose Dace



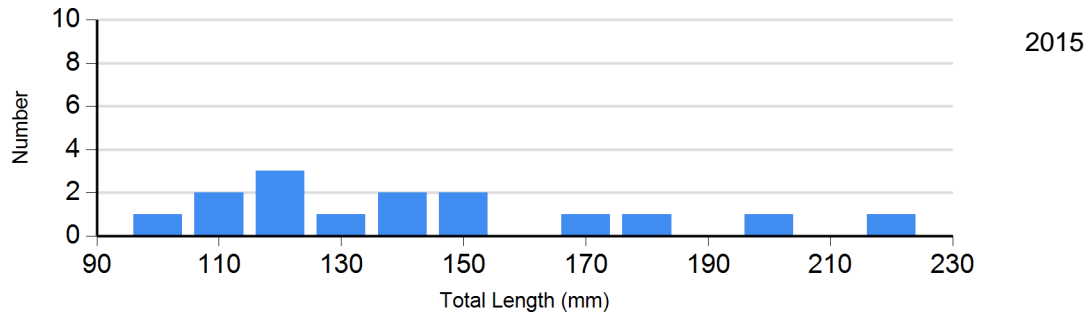
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**Species:** White Sucker



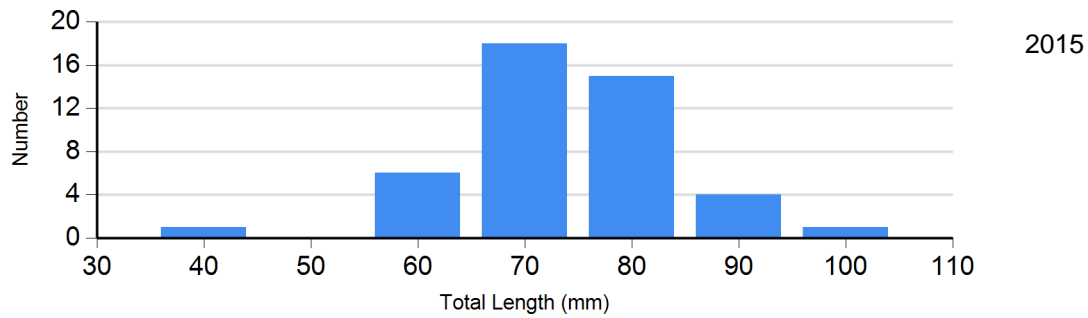
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**Species:** Brown Trout



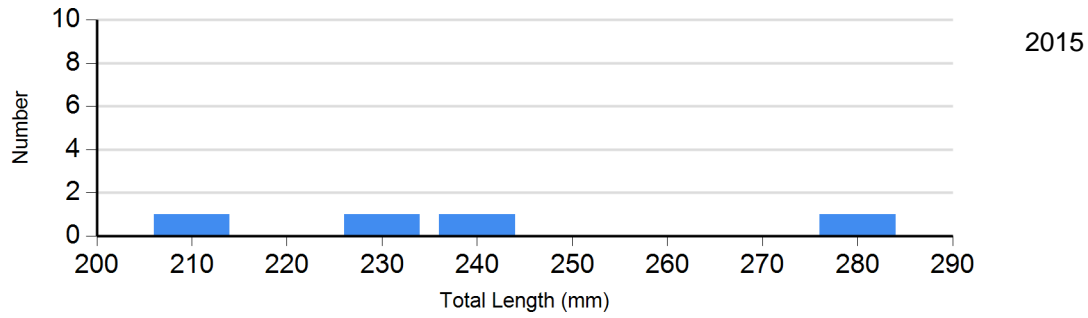
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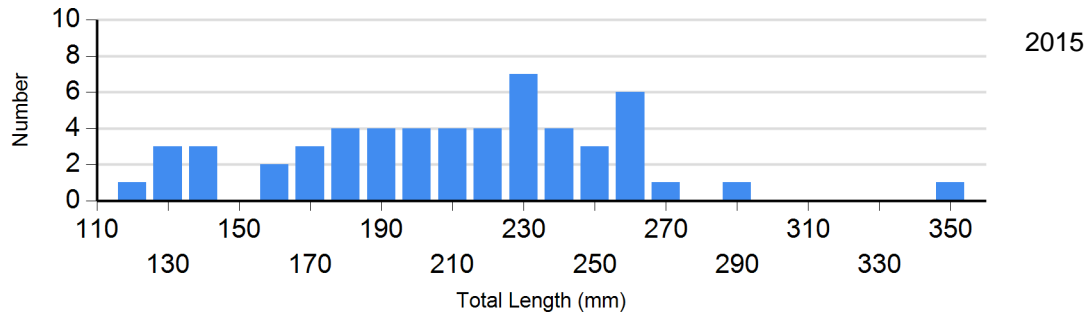
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**Species:** Longnose Dace



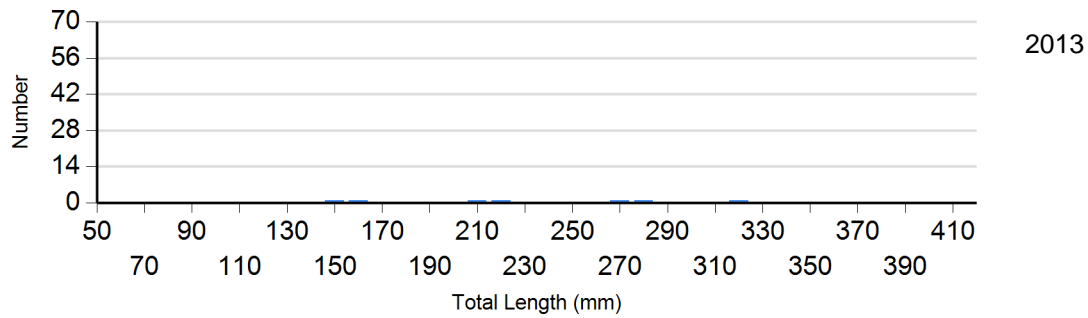
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**Species:** Smallmouth Bass

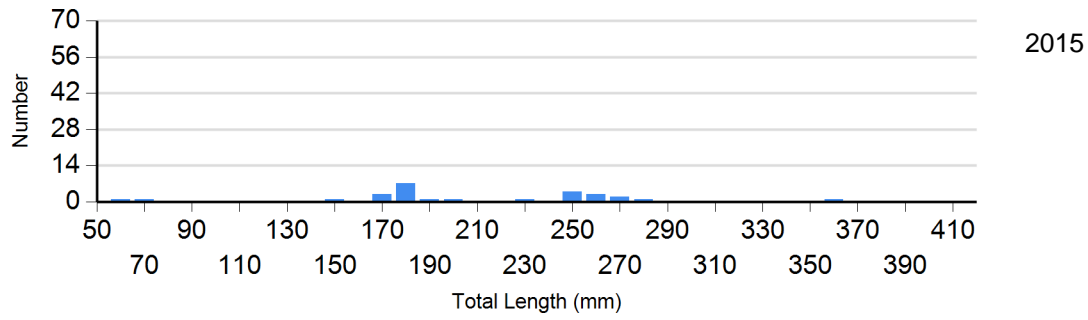


**Site:** 995  
**Species:** White Sucker

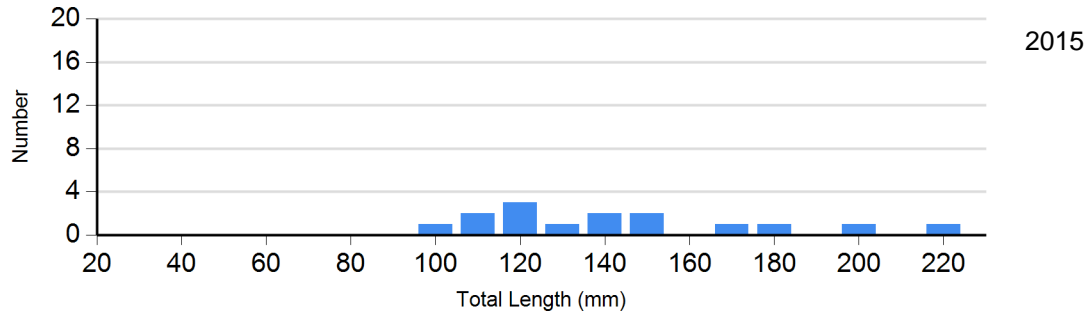
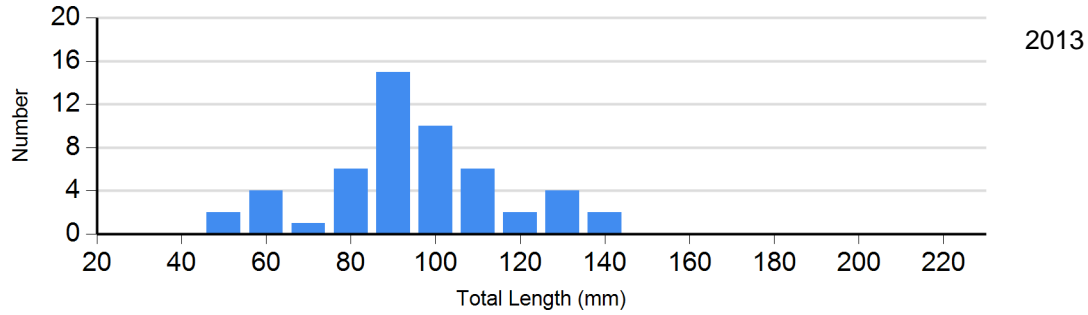


**Site:** 996  
**Species:** Brown Trout

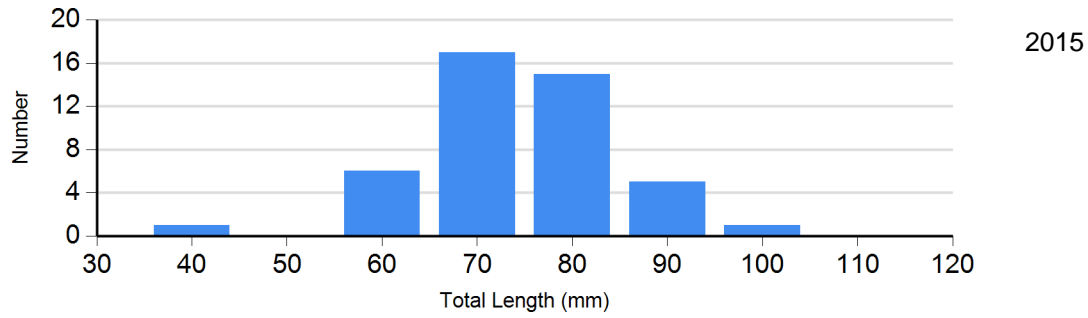




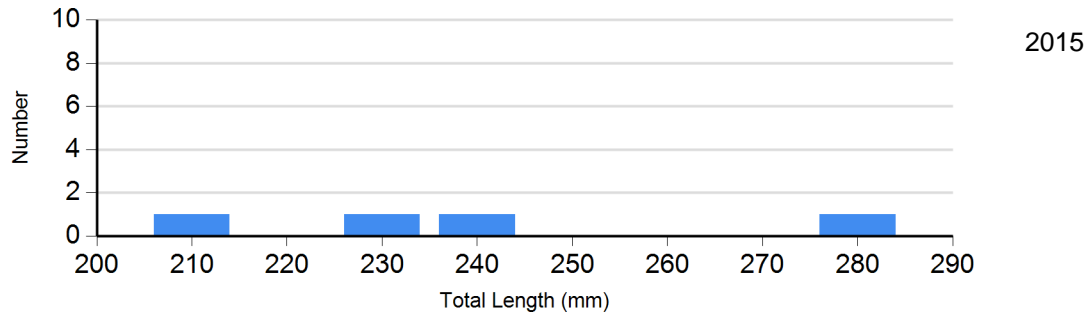
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Species: Creek Chub



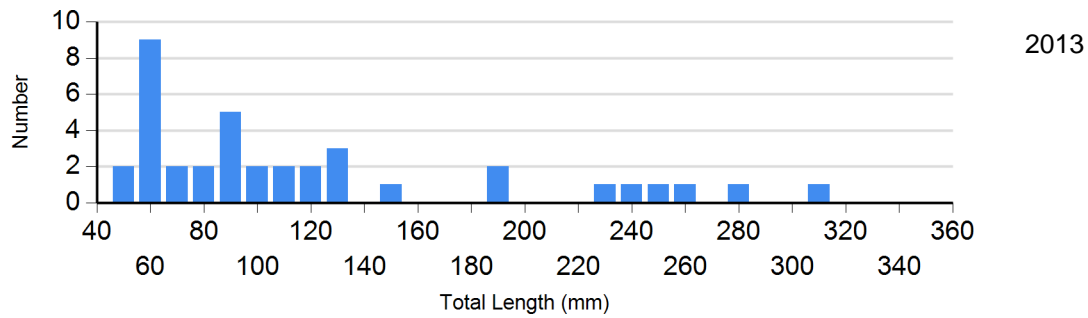
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**Species:** Longnose Dace

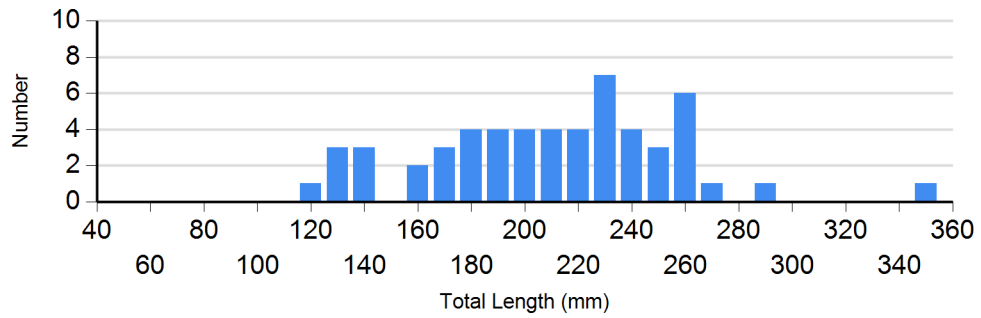


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**Species:** Smallmouth Bass

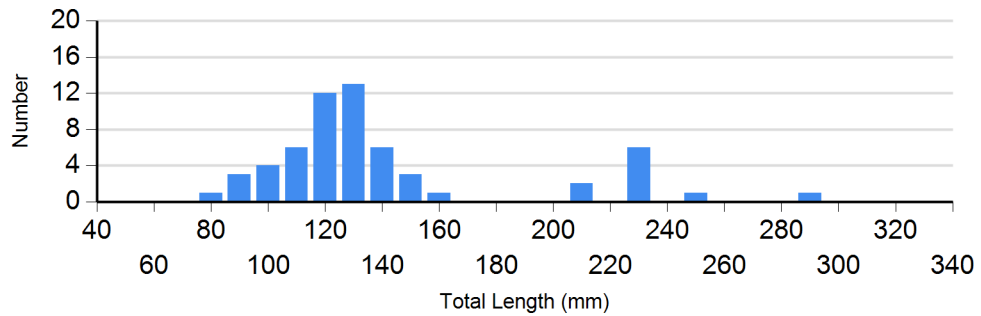
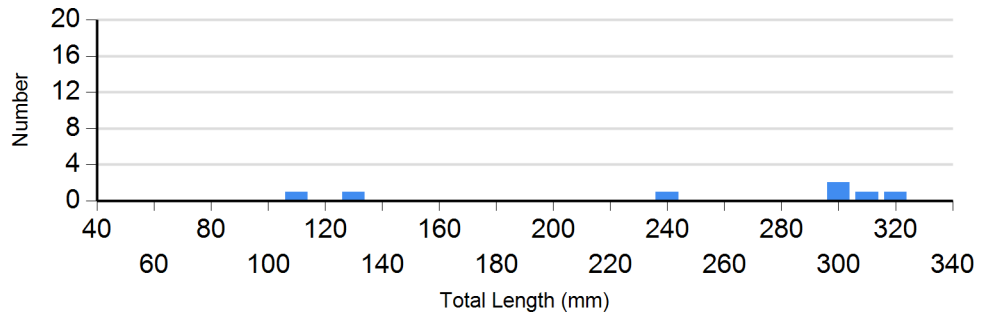


**Site:** 996  
**Species:** White Sucker

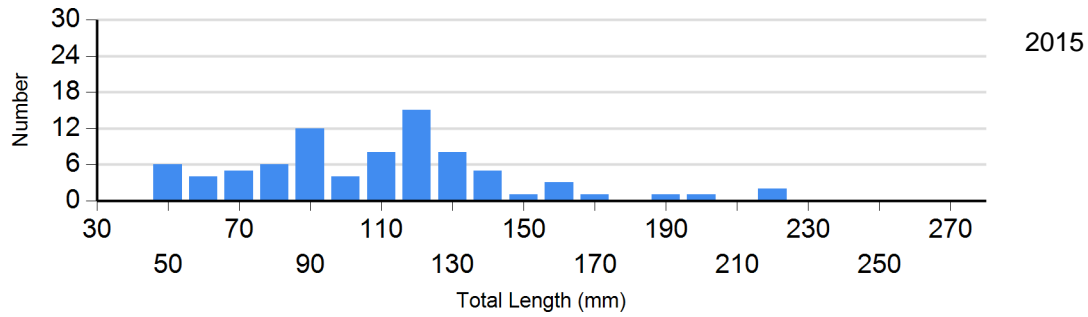
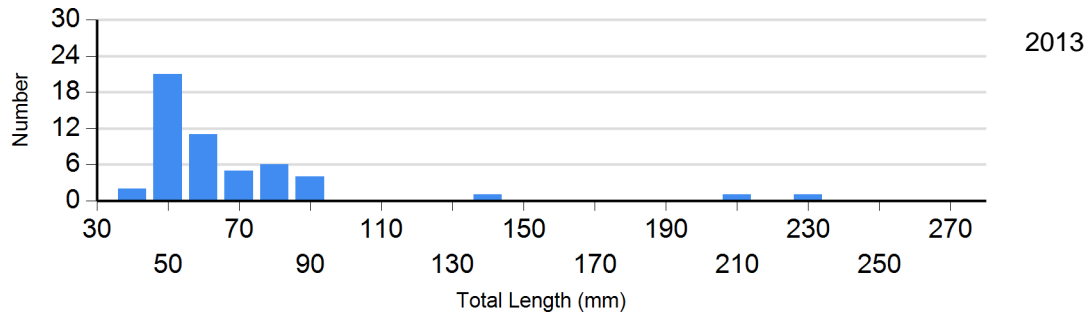




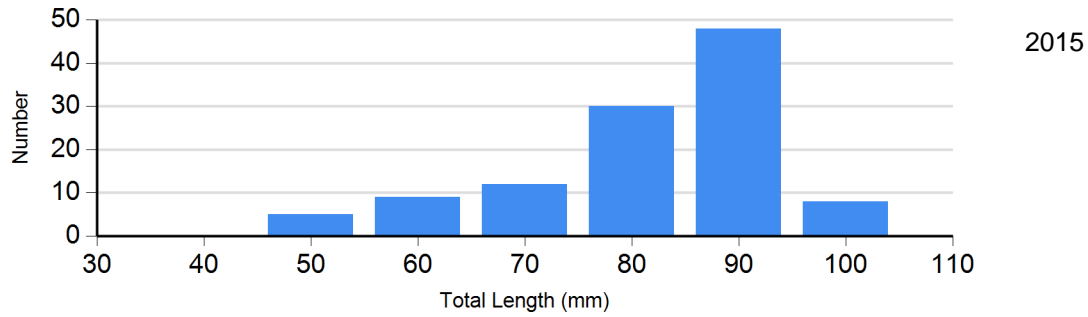
Site: 1129  
Species: Brown Trout



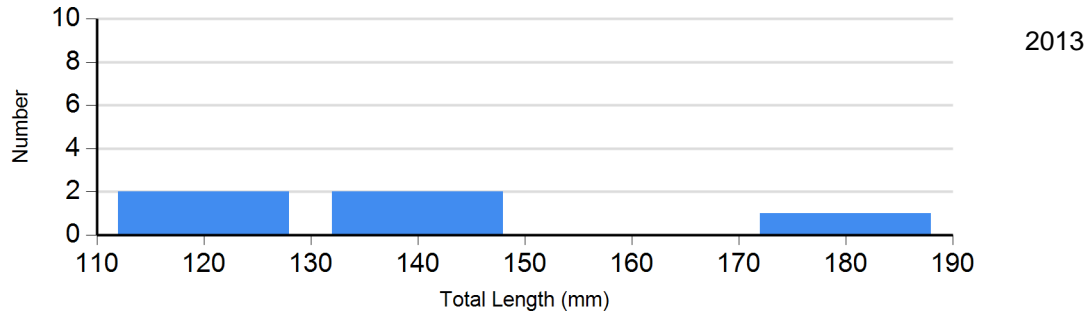
**Site:** 1129  
**Species:** Creek Chub



**Site:** 1129  
**Species:** Longnose Dace



Site: 1129  
Species: Mountain Sucker



Site: 1129  
Species: White Sucker

