

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Rapid Creek - North Fork, Pennington County
02-0075-00
2017

Table 1. Population and Biomass Estimates for Rapid Creek - North Fork

Site Number: 2	Date Sampled: 05/31/2017	Conductivity (umhos/cm):
Site Midpoint (Latitude, Longitude): 44.13240684, -103.73631714	Site Length (m): 100	pH:
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 3.3	Water Temperature (C): 13.0
Stream Classification: BR2	Number of Pass: 3	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	17	27	58	17	823	34	270	333	30.03	434	119.0	40.9
Brown Trout	>=200mm	9	9	9	9	274	31	90	111	27.59	145	227.1	112.7
Brown Trout	All	26	29	36	26	884	70	290	358	62.24	467	156.4	78.9
Mountain Sucker	All	2	2	3	2	61	3	20	25	2.80	32	151.5	51.5
White Sucker	All	12	13	18	12	396	70	130	160	62.60	209	103.7	177.0

Site Number: 119	Date Sampled: 05/31/2017	Conductivity (umhos/cm):
Site Midpoint (Latitude, Longitude): 44.19752923, -103.76147540	Site Length (m): 100	pH:
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 4.2	Water Temperature (C): 10.0
Stream Classification: BK3, BR2	Number of Pass: 3	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	12	12	13	12	283	11	120	115	9.70	193	157.2	38.3
Brook Trout	>=200mm	2	2	3	2	47	4	20	19	3.79	32	205.0	90.0
Brook Trout	All	14	14	15	14	330	15	140	134	13.49	225	164.0	45.7

Brown Trout	<200mm	19	19	20	19	448	16	190	182	14.33	306	135.0	35.8
Brown Trout	>=200mm	10	10	10	10	236	34	100	96	30.33	161	237.5	143.9
Brown Trout	All	29	29	30	29	685	51	290	277	45.47	467	170.3	74.4
Mountain Sucker	All	14	15	19	14	354	11	150	143	10.02	241	132.6	31.7
White Sucker	All	24	24	25	24	567	21	240	229	18.50	386	140.9	36.6

Site Number: 185
Site Midpoint (Latitude, Longitude): 44.22998341, -103.79465365
Survey Completed by: South Dakota Game, Fish and Parks
Stream Classification: BK0

Date Sampled: 05/31/2017
Site Length (m): 100
Mean Width (m): 1.4
Number of Pass: 3
Conductivity (umhos/cm):
pH:
Water Temperature (C): 16.5
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	21	21	21	21	1453	69	210	588	61.65	338	149.1	47.5
Brook Trout	All	21	21	21	21	1453	69	210	588	61.65	338	149.1	47.5

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	
Class BR1	Number of wild Brown Trout exceeds 150 per acre
Class BR2	Number of wild Brook Trout ranges from 25 to 150 per acre
Class BR3	Number of wild Brown Trout is less than 25 per acre
Class BK1	Number of wild Brook Trout exceeds 150 per acre
Class BK2	Number of wild Brook Trout ranges from 25 to 150 per acre
Class BK3	Number of wild Brook Trout is less than 25 per acre
Class RB1	Number of wild Rainbow Trout exceeds 25 per acre
Class RB2	Number of wild Rainbow Trout is less than 25 per acre

Table 2. Species composition and population estimates on Rapid Creek - North Fork, 2007-2017

Site 2

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brown Trout <200mm	Jun 20, 2014	21	21-23	
	May 31, 2017	27	17-58	
Brown Trout >=200mm	Jun 20, 2014	12	12-12	BR2
	May 31, 2017	9	9-9	BR2
Longnose Dace	Jun 20, 2014	39	25-74	
Mountain Sucker	Jun 20, 2014	3	3-3	
	May 31, 2017	2	2-3	

White Sucker	Jun 20, 2014	12	11-17
	May 31, 2017	13	12-18

Site 119

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jun 18, 2014	6	6-9	
	Sep 08, 2015	20	20-20	
	May 25, 2016	25	25-25	
	May 25, 2016	23	23-25	
	May 31, 2017	12	12-13	
Brook Trout >=200mm	Jun 18, 2014	5	5-5	BK2
	Sep 08, 2015	4	4-4	BK2
	May 25, 2016	3	3-3	BK2
	May 25, 2016	1	1-1	BK3
	May 31, 2017	2	2-3	BK3
Brown Trout <200mm	Jun 18, 2014	7	7-9	
	Sep 08, 2015	37	37-38	

Brown Trout <200mm	May 25, 2016	19	19-21	
	May 25, 2016	18	18-18	
	May 31, 2017	19	19-20	
Brown Trout >=200mm	Jun 18, 2014	9	9-10	BR2
	Sep 08, 2015	8	8-8	BR2
	May 25, 2016	7	7-7	BR2
	May 25, 2016	11	11-11	BR2
	May 31, 2017	10	10-10	BR2
Longnose Dace	Jun 18, 2014	99	88-112	
	Sep 08, 2015	56	40-85	
	May 25, 2016	70	59-86	
	May 25, 2016	134	59-299	
Mountain Sucker	Jun 18, 2014	62	44-93	
	Sep 08, 2015	14	11-25	
	May 25, 2016	38	34-46	
	May 25, 2016	11	11-13	

Mountain Sucker	May 31, 2017	15	14-19
White Sucker	Jun 18, 2014	121	115-129
	Sep 08, 2015	1	1-1
	May 25, 2016	1	1-1
	May 25, 2016	4	4-4
	May 31, 2017	24	24-25

Site 185

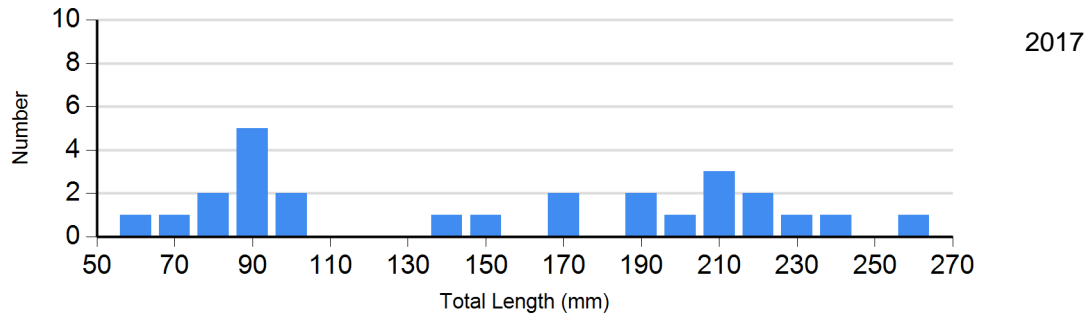
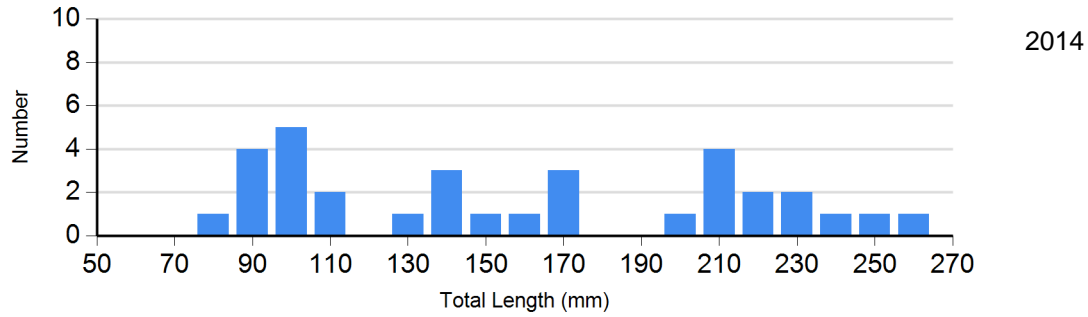
Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jun 23, 2008	15	15-15	
	Jun 18, 2014	18	18-19	
	May 25, 2016	35	35-36	
	May 31, 2017	21	21-21	
Brook Trout >=200mm	Jun 23, 2008	1	1-1	BK3
	Jun 18, 2014	3	3-4	BK2
	May 25, 2016	2	2-2	BK2
Longnose Dace	Jun 23, 2008	1	1-1	

Length Frequency Distribution

Length frequency histogram of species sampled by year.

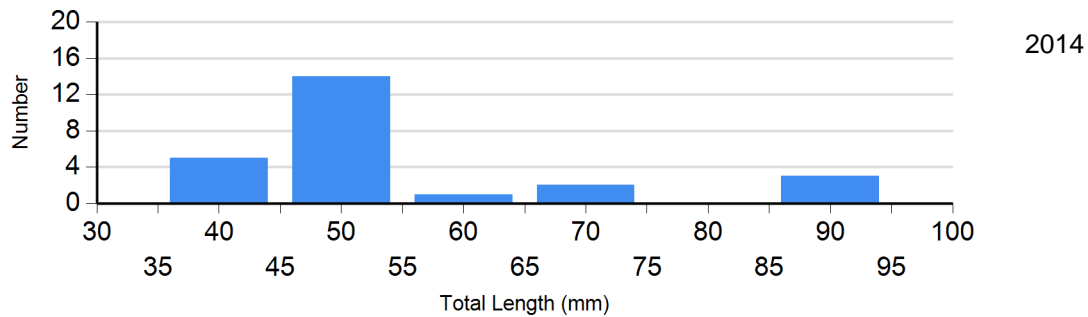
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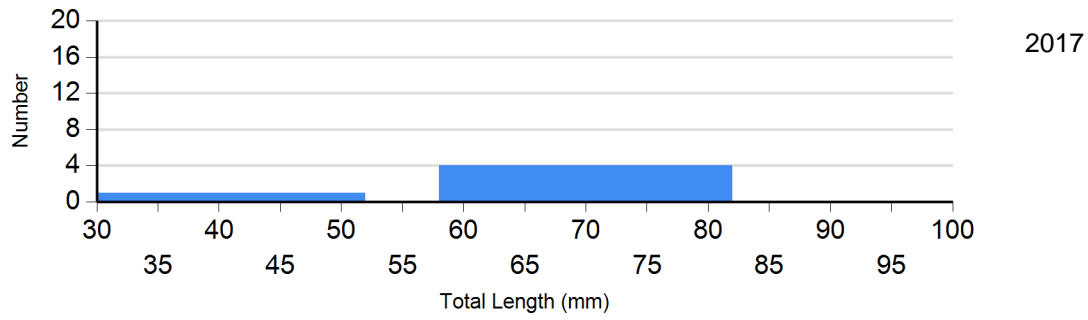
Species: Brown Trout



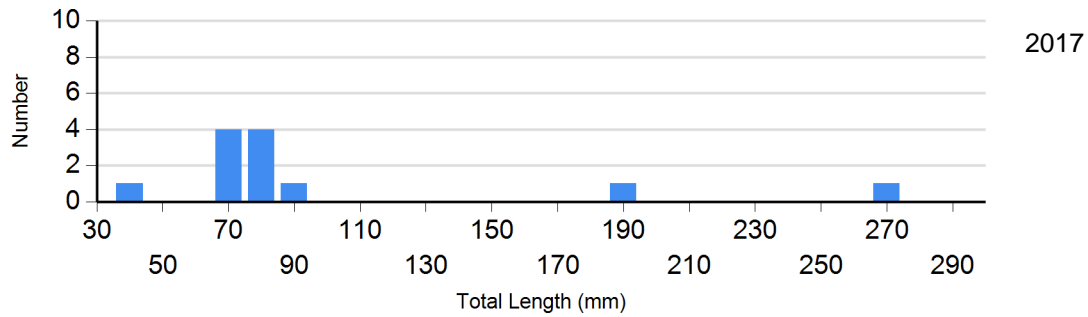
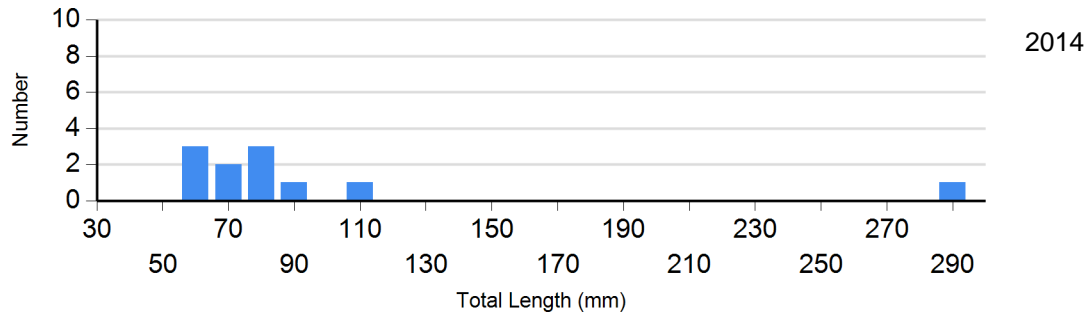
Site: 2

Species: Longnose Dace

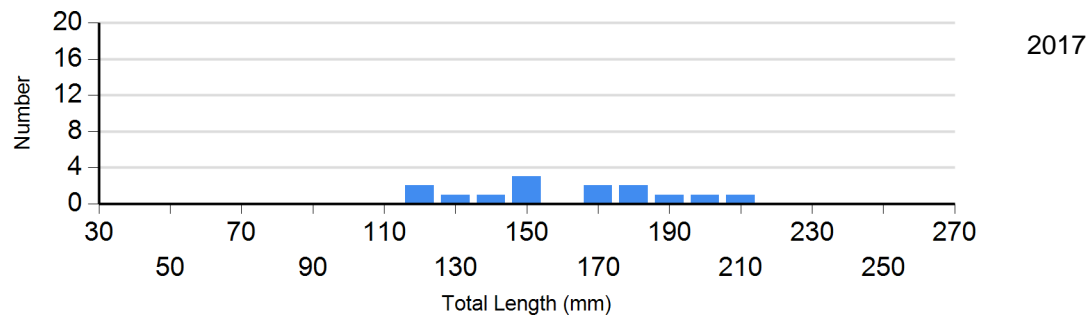
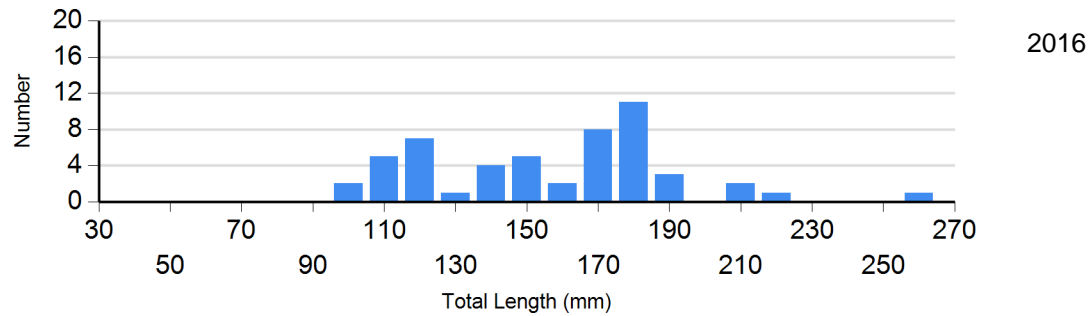
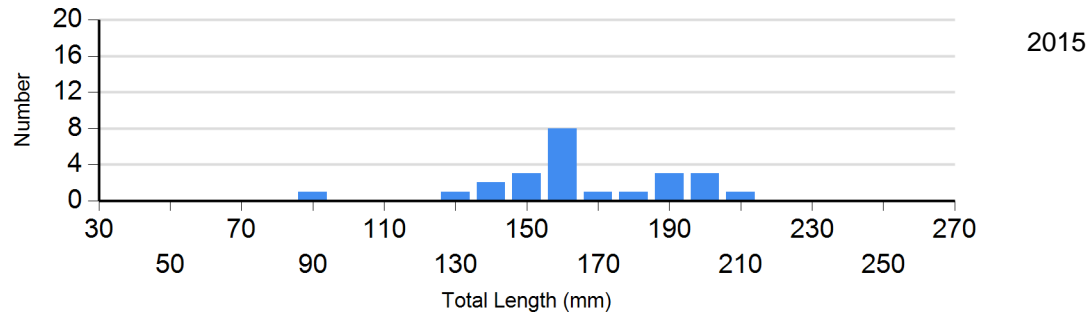
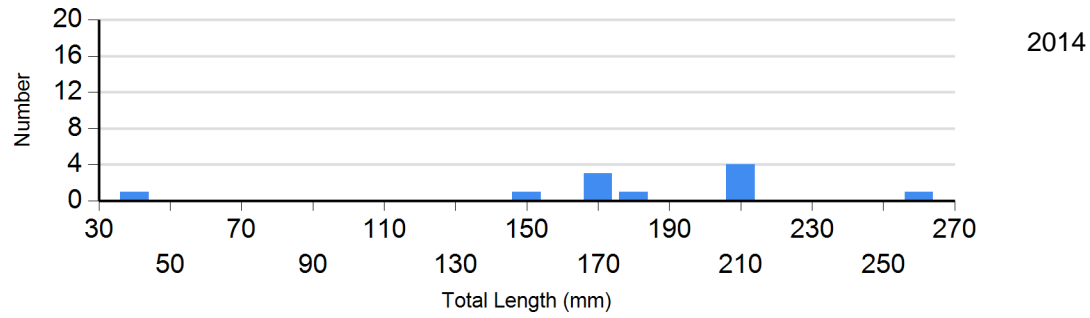




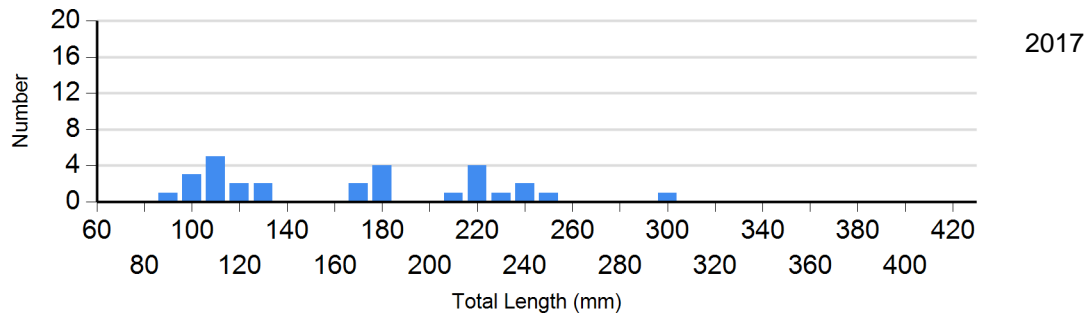
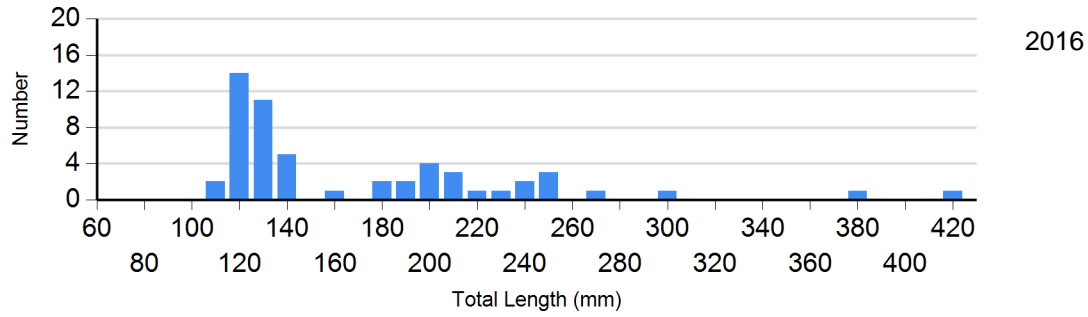
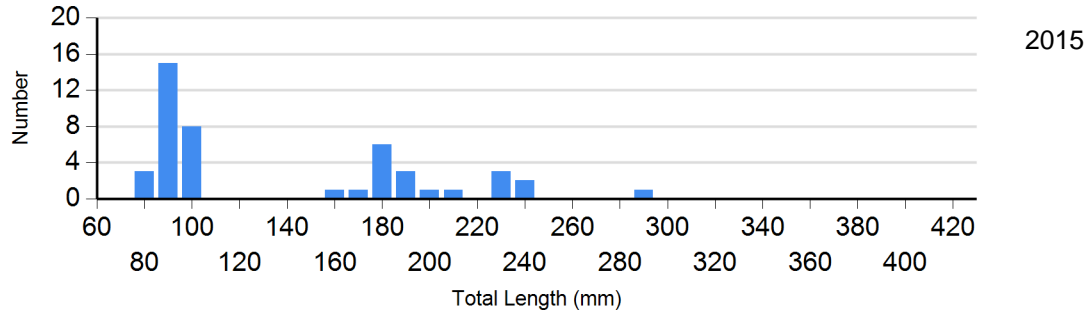
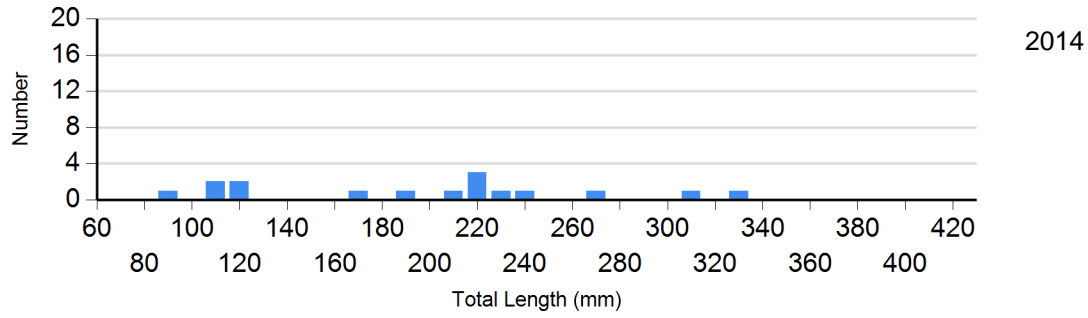
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Species: White Sucker



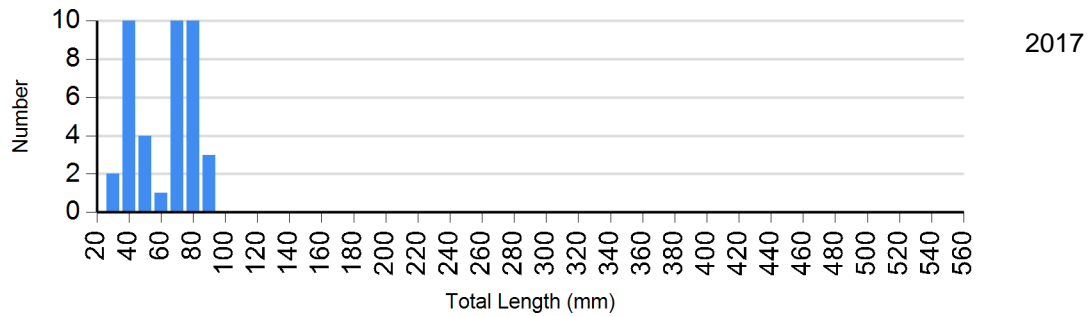
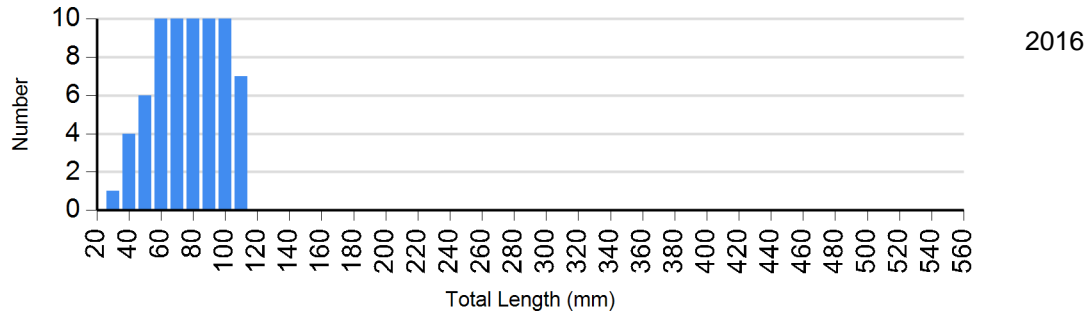
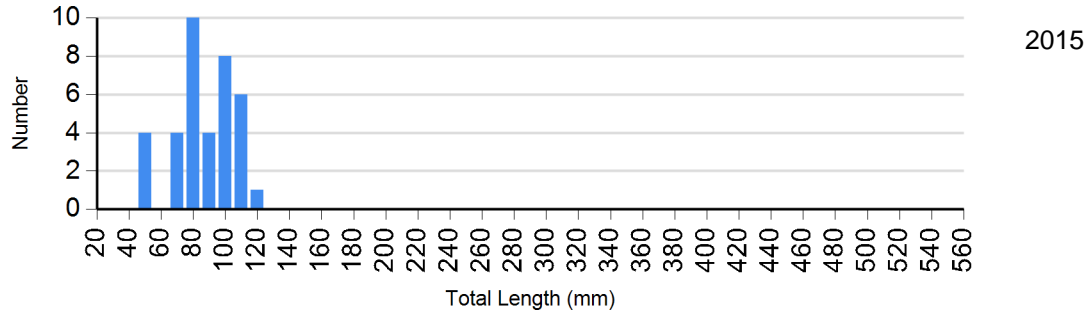
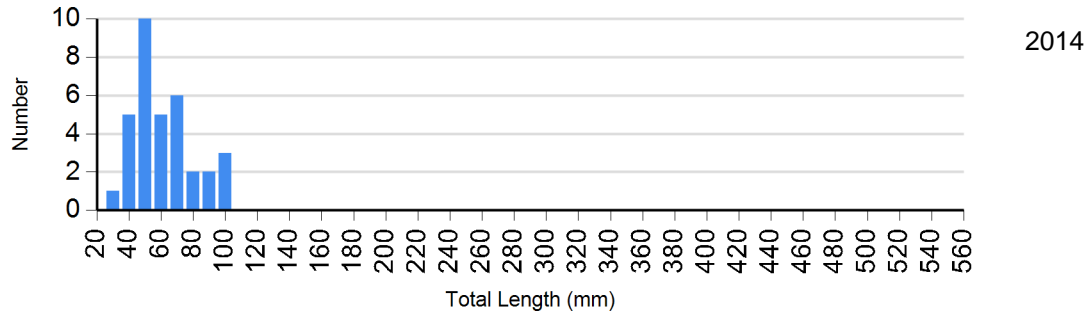
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Species: Brook Trout



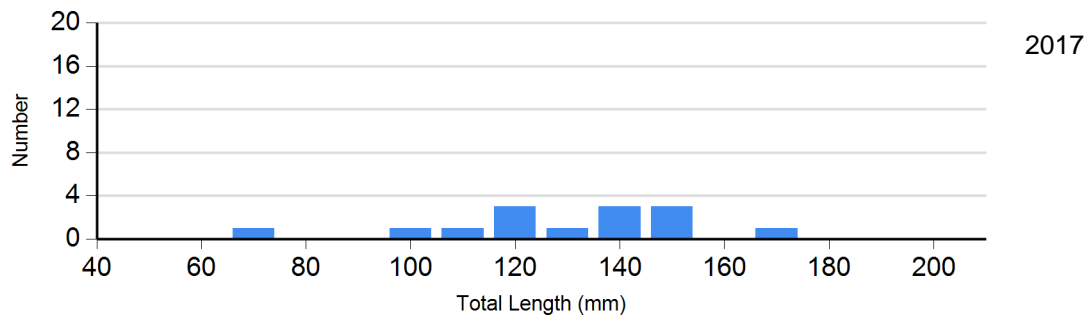
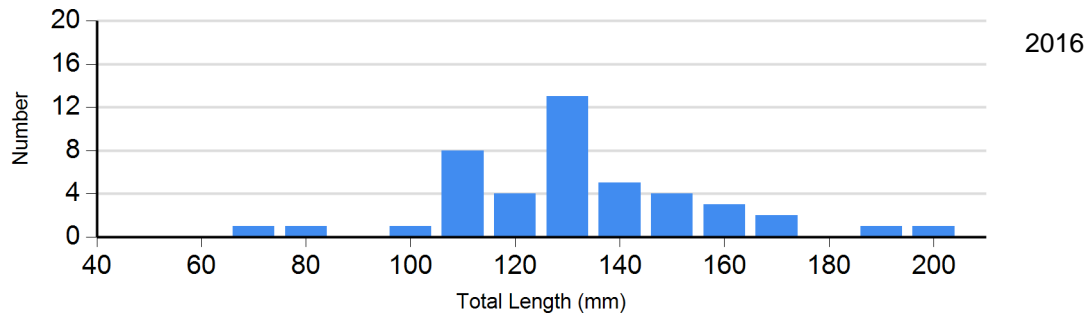
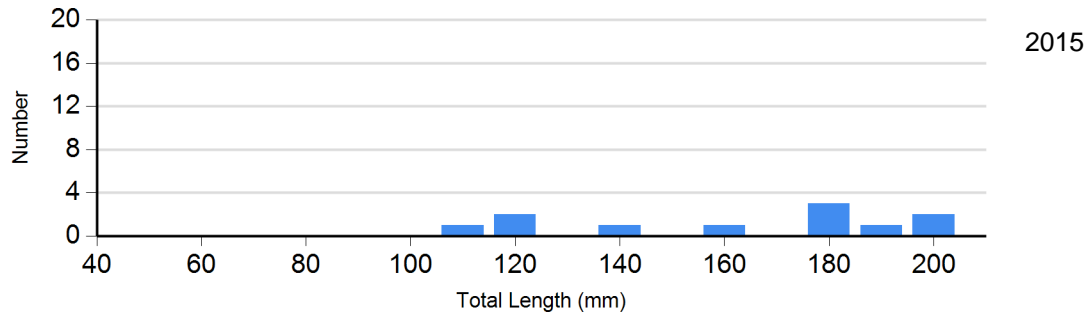
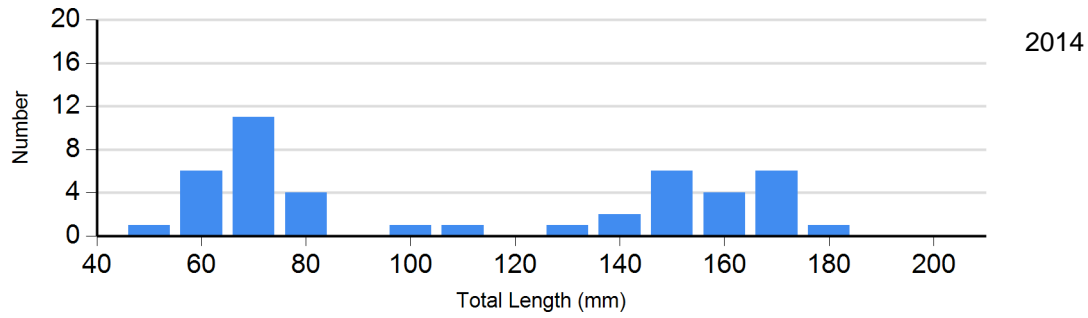
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Species: Brown Trout



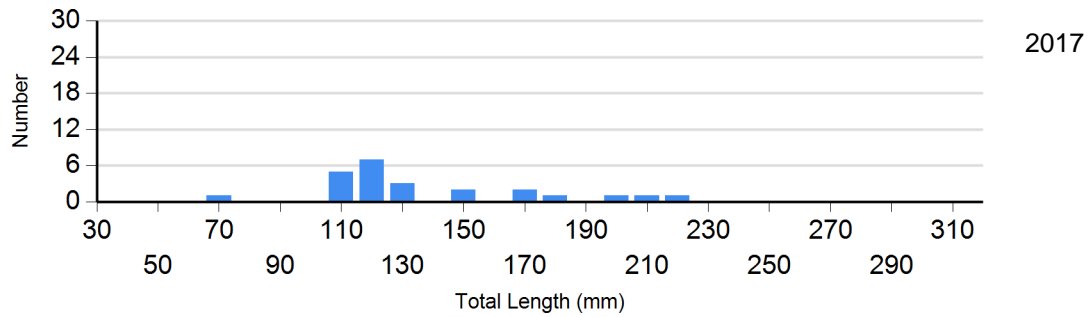
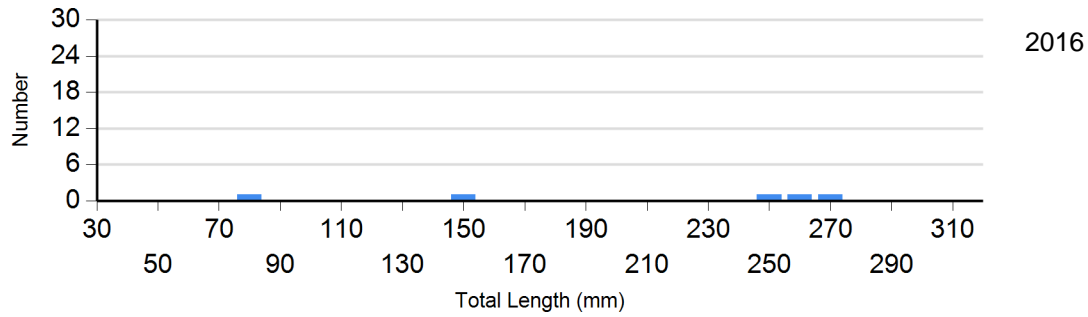
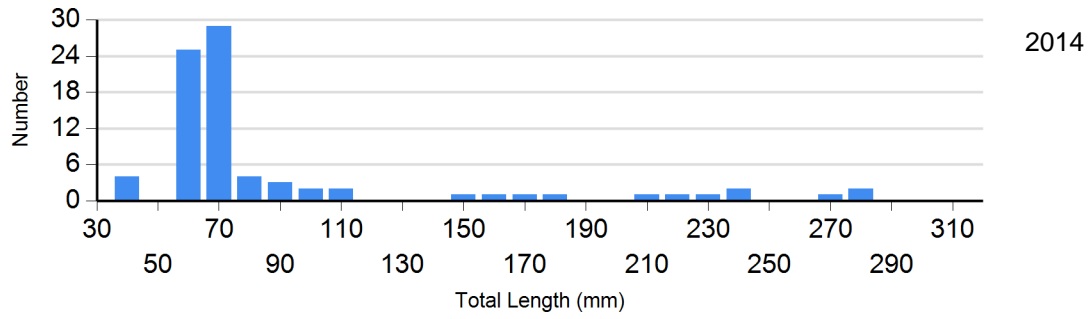
Site: 119
Species: Longnose Dace



Site: 119
Species: Mountain Sucker



Site: 119
Species: White Sucker



Site: 185
Species: Brook Trout

