

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Rapid Creek - North Fork, Pennington County
02-0075-00
2014

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

Site Number: 2
Site Midpoint (Latitude, Longitude): 44.13240684, -103.73631714
Survey Completed by: South Dakota Game, Fish and Parks
Stream Classification: BR2

Date Sampled: 06/20/2014
Site Length (m): 100
Mean Width (m): 4.0
Number of Pass: 3

Conductivity (umhos/cm):
pH:
Water Temperature (C):
Voltage: 300

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	21	21	23	21	529	14	210	214	12.18	338	124.2	25.8
Brown Trout	>=200mm	12	12	12	12	302	37	120	122	33.31	193	228.0	123.5
Brown Trout	All	33	33	35	33	831	51	330	336	45.49	531	161.9	61.3
Longnose Dace	All	25	39	74	25	982	9	390	398	7.60	628	60.4	8.7
Mountain Sucker	All	3	3	3	3	76	3	30	31	2.40	48	131.3	35.7
White Sucker	All	11	12	17	11	302	19	120	122	17.21	193	99.1	63.8

Site Number: 119
Site Midpoint (Latitude, Longitude): 44.19752923, -103.76147540
Survey Completed by: South Dakota Game, Fish and Parks
Stream Classification: BK2, BR2, RB2

Date Sampled: 06/18/2014
Site Length (m): 100
Mean Width (m): 4.6
Number of Pass: 3

Conductivity (umhos/cm):
pH:
Water Temperature (C):
Voltage: 300

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	6	6	9	6	129	6	60	52	5.43	97	151.2	47.0
Brook Trout	>=200mm	5	5	5	5	108	11	50	44	10.15	80	223.6	105.4

Brook Trout	All	11	11	13	11	237	18	110	96	16.14	177	184.1	76.2
Brown Trout	<200mm	7	7	9	7	151	5	70	61	4.04	113	135.0	30.0
Brown Trout	>=200mm	9	9	10	9	194	32	90	79	28.69	145	254.2	165.6
Brown Trout	All	16	16	18	16	345	38	160	140	34.30	257	202.1	111.3
Longnose Dace	All	88	99	112	88	2135	14	990	865	12.07	1593	65.2	6.3
Mountain Sucker	All	44	62	93	44	1337	56	620	542	49.99	998	115.1	41.9
Rainbow Trout	>=200mm	1	1	1	1	22	27	10	9	24.13	16	230.0	1253.0
Rainbow Trout	All	1	1	1	1	22	27	10	9	24.13	16	230.0	1253.0
White Sucker	All	115	121	129	115	2610	281	1210	1057	250.79	1947	94.8	107.6

Site Number: 185

Site Midpoint (Latitude, Longitude): 44.22998341, -103.79465365

Survey Completed by: South Dakota Game, Fish and Parks

Stream Classification: BK2

Date Sampled: 06/18/2014

Site Length (m): 100

Mean Width (m): 1.6

Number of Pass: 4

Conductivity (umhos/cm):

pH:

Water Temperature (C):

Voltage:

300

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	18	18	19	18	1125	61	180	456	54.74	290	151.9	54.5
Brook Trout	>=200mm	3	3	4	3	188	20	30	76	18.30	48	211.0	109.3
Brook Trout	All	21	21	22	21	1313	82	210	532	73.05	338	160.4	62.3
Longnose Dace	All	1	1	2	1	63	1	10	25	1.28	16	131.0	23.0

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	
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, 2004-2014

Site 2

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brown Trout <200mm	Sep 25, 2006	41	41-42	
	Jun 20, 2014	21	21-23	
Brown Trout >=200mm	Sep 25, 2006	2	2-2	BR2
	Jun 20, 2014	12	12-12	BR2
Longnose Dace	Sep 25, 2006	36	37-47	
	Jun 20, 2014	39	25-74	
Mountain Sucker	Sep 25, 2006	1	1-1	

Mountain Sucker	Jun 20, 2014	3	3-3
White Sucker	Sep 25, 2006	10	10-10
	Jun 20, 2014	12	11-17

Site 119

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jun 18, 2014	6	6-9	
Brook Trout >=200mm	Jun 18, 2014	5	5-5	BK2
Brown Trout <200mm	Jun 18, 2014	7	7-9	
Brown Trout >=200mm	Jun 18, 2014	9	9-10	BR2
Longnose Dace	Jun 18, 2014	99	88-112	
Mountain Sucker	Jun 18, 2014	62	44-93	
Rainbow Trout >=200mm	Jun 18, 2014	1	1-1	RB2
White Sucker	Jun 18, 2014	121	115-129	

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	

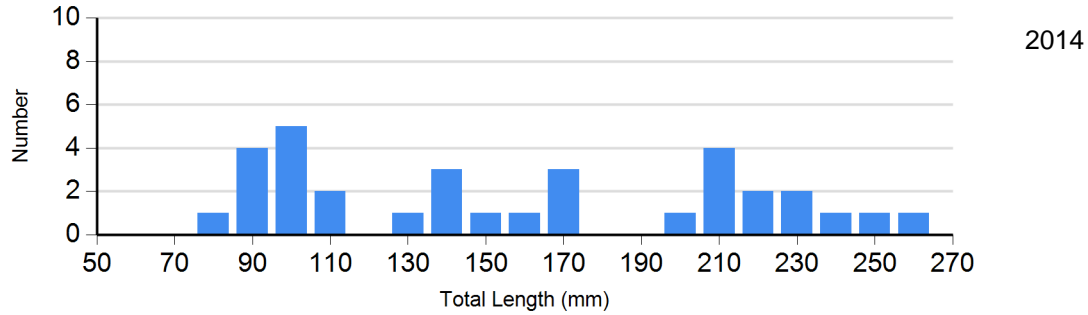
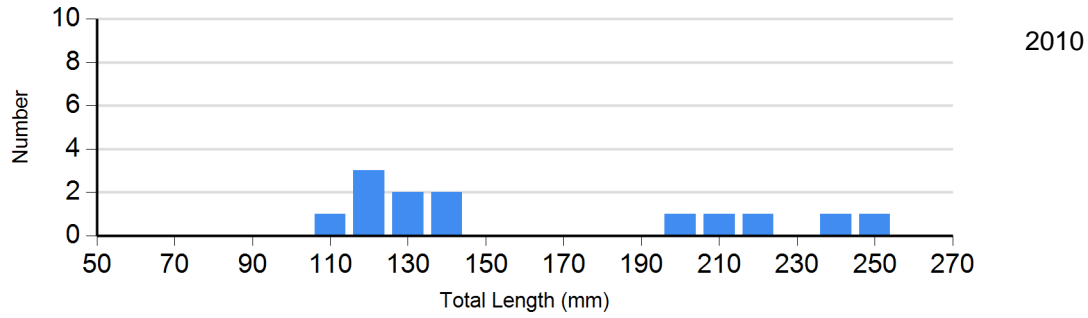
Brook Trout >=200mm	Jun 23, 2008	1	1-1	BK3
	Jun 18, 2014	3	3-4	BK2
Longnose Dace	Jun 23, 2008	1	1-1	
	Jun 18, 2014	1	1-2	

Length Frequency Distribution

Length frequency histogram of species sampled by year.

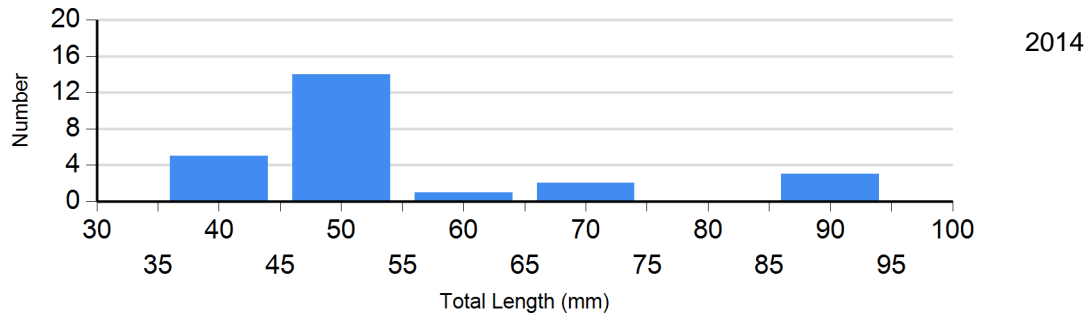
Site: 2

Species: Brown Trout

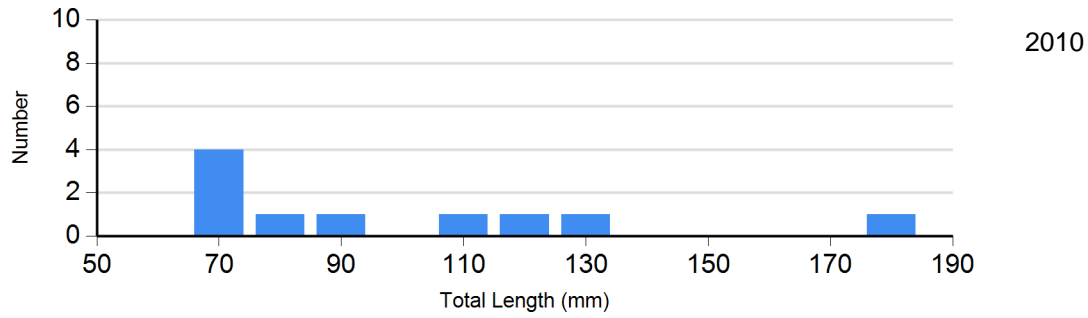


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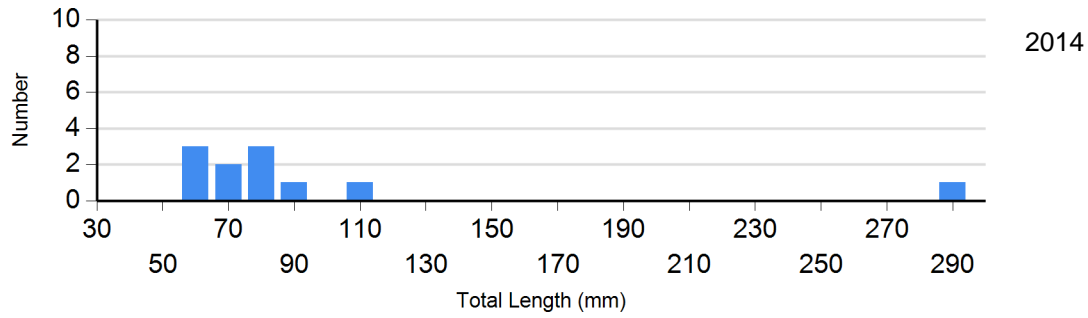
Species: Longnose Dace



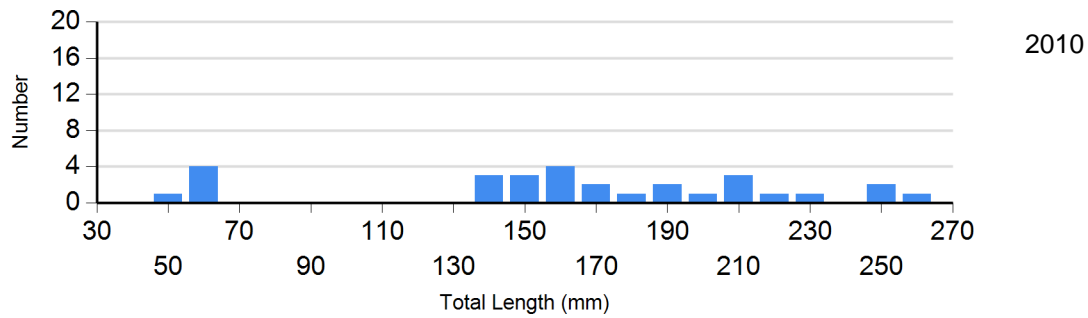
Site: 2
Species: Mountain Sucker

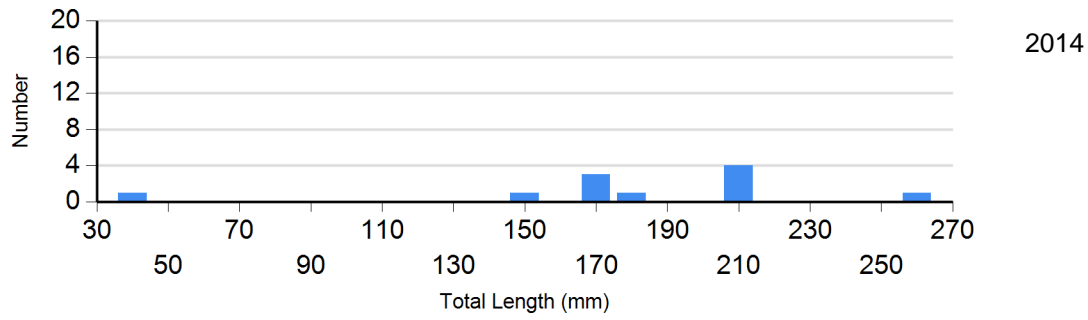


Site: 2
Species: White Sucker

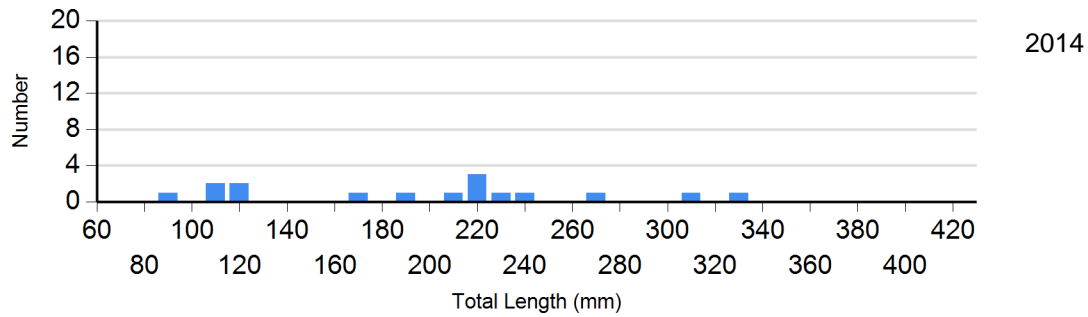
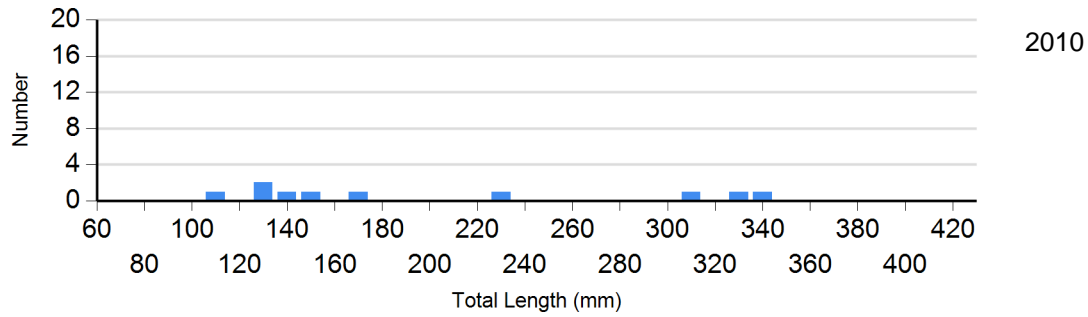


Site: 119
Species: Brook Trout

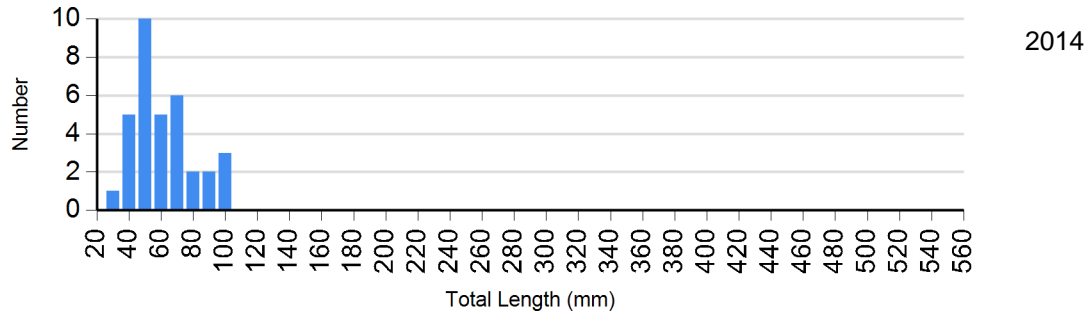




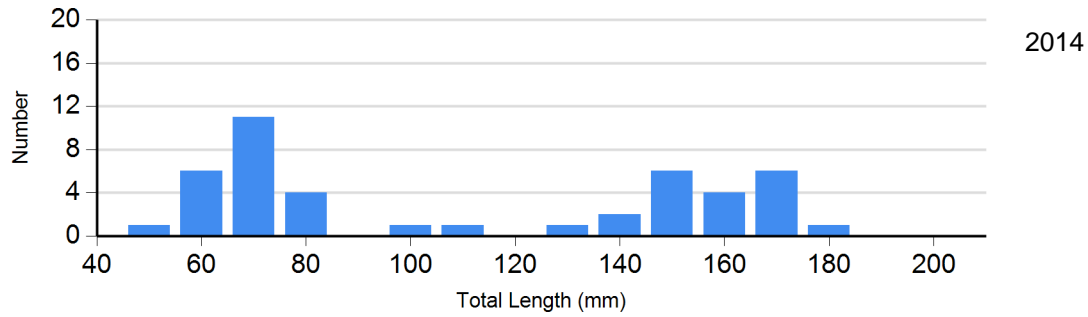
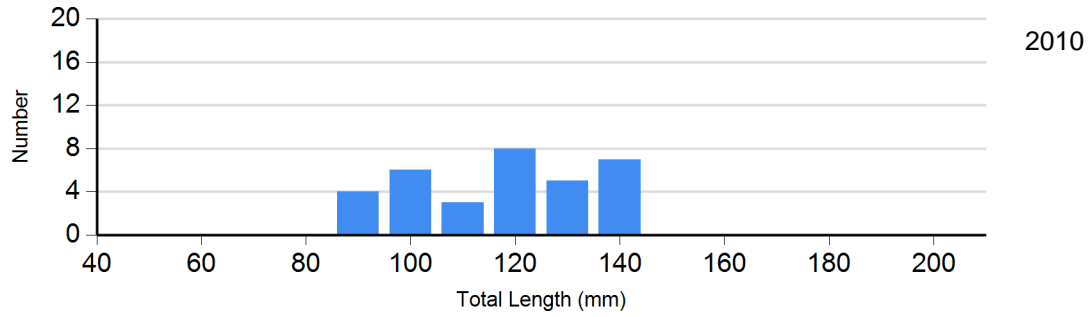
Site: 119
Species: Brown Trout



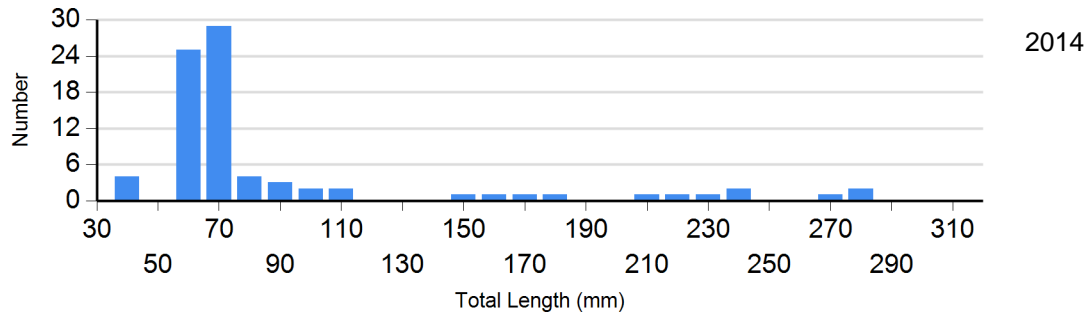
Site: 119
Species: Longnose Dace



Site: 119
Species: Mountain Sucker



Site: 119
Species: White Sucker



Site: 185
Species: Brook Trout

