

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Elk Creek, Meade County
09-0015-00
2016

Table 1. Population and Biomass Estimates for Elk Creek

Site Number: 2211	Date Sampled: 06/02/2016	Conductivity (umhos/cm): 275
Site Midpoint (Latitude, Longitude): 44.29475339, -103.52310349	Site Length (m): 100	pH: 7.1
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 3.8	Water Temperature (C): 11.9
Stream Classification: BK1, BR3	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	31	31	32	31	806	36	310	326	32.00	499	155.6	44.5
Brook Trout	>=200mm	20	20	20	20	520	68	200	211	60.58	322	232.8	130.5
Brook Trout	All	51	51	52	51	1326	104	510	537	92.57	821	185.9	78.2
Brown Trout	<200mm	2	2	3	2	52	3	20	21	2.79	32	174.0	60.0
Brown Trout	>=200mm	2	2	2	2	52	17	20	21	14.88	32	309.0	320.5
Brown Trout	All	4	4	4	4	104	20	40	42	17.67	64	241.5	190.3
Creek Chub	All	5	5	5	5	130	9	50	53	7.66	80	170.4	66.0
Longnose Dace	All	111	116	123	111	3017	39	1160	1222	35.01	1866	74.6	13.0
Mountain Sucker	All	118	122	128	118	3173	100	1220	1285	88.94	1963	106.4	31.4
White Sucker	All	55	56	59	55	1456	69	560	590	61.97	901	130.1	47.7

Site Number: 2460	Date Sampled: 06/02/2016	Conductivity (umhos/cm): 301
Site Midpoint (Latitude, Longitude): 44.27675204, -103.69560209	Site Length (m): 100	pH: 7.5
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 2.4	Water Temperature (C):
Stream Classification: BK1	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	48	48	49	48	1963	97	480	795	86.75	772	158.5	49.5
Brook Trout	>=200mm	17	17	18	17	695	84	170	282	74.85	274	222.8	120.6
Brook Trout	All	65	65	66	65	2658	181	650	1076	161.60	1046	175.3	68.1
Longnose Dace	All	6	6	8	6	245	3	60	99	2.77	97	98.0	12.7
Mountain Sucker	All	9	9	10	9	368	12	90	149	10.70	145	139.0	32.6

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 Elk Creek, 2006-2016

Site 2211

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Sep 04, 2014	3	3-4	
	Jun 02, 2016	31	31-32	
Brook Trout >=200mm	Sep 04, 2014	14	14-15	BK1
	Jun 02, 2016	20	20-20	BK1
Brown Trout <200mm	Jun 02, 2016	2	2-3	
Brown Trout >=200mm	Sep 04, 2014	1	1-1	BR3
	Jun 02, 2016	2	2-2	BR3

Creek Chub	Sep 04, 2014	29	28-32
	Jun 02, 2016	5	5-5
Longnose Dace	Sep 04, 2014	109	70-166
	Jun 02, 2016	116	111-123
Mountain Sucker	Sep 04, 2014	36	35-39
	Jun 02, 2016	122	118-128
White Sucker	Sep 04, 2014	33	32-36
	Jun 02, 2016	56	55-59

Site 2460

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Sep 04, 2015	72	71-75	
	Jun 02, 2016	48	48-49	
Brook Trout >=200mm	Sep 04, 2015	22	22-22	BK3
	Jun 02, 2016	17	17-18	BK1
Longnose Dace	Sep 04, 2015	7	7-9	
	Jun 02, 2016	6	6-8	

Mountain Sucker

Sep 04, 2015

8

4-42

Jun 02, 2016

9

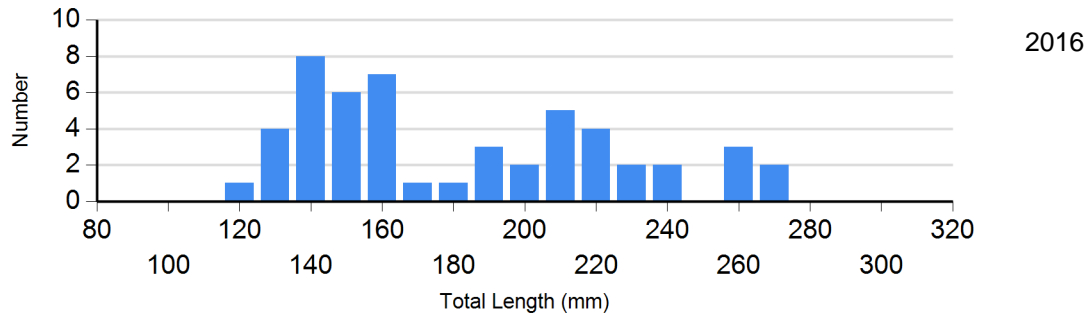
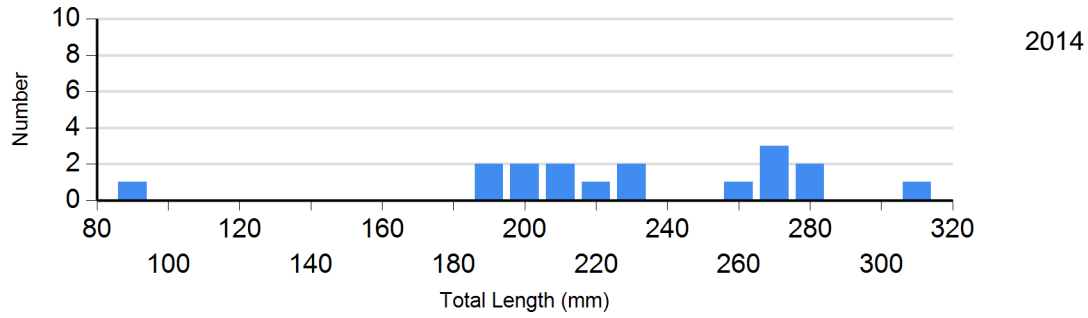
9-10

Length Frequency Distribution

Length frequency histogram of species sampled by year.

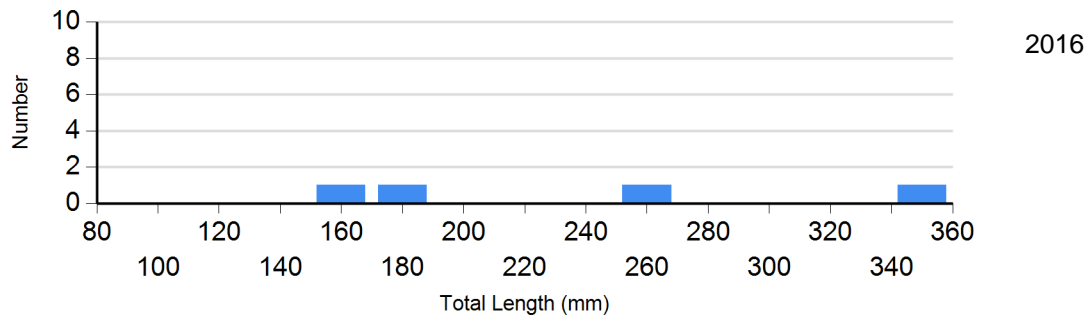
Site: 2211

Species: Brook Trout

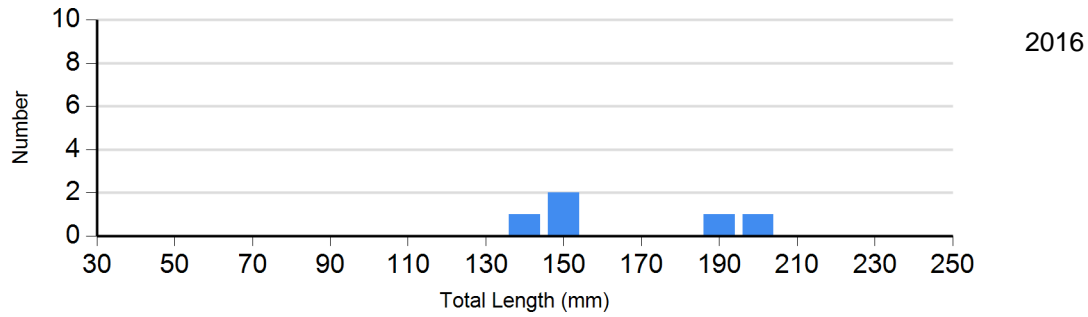
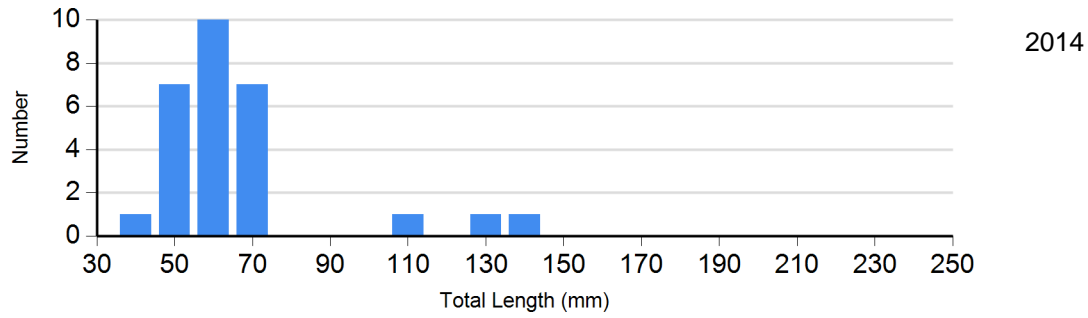


Site: 2211

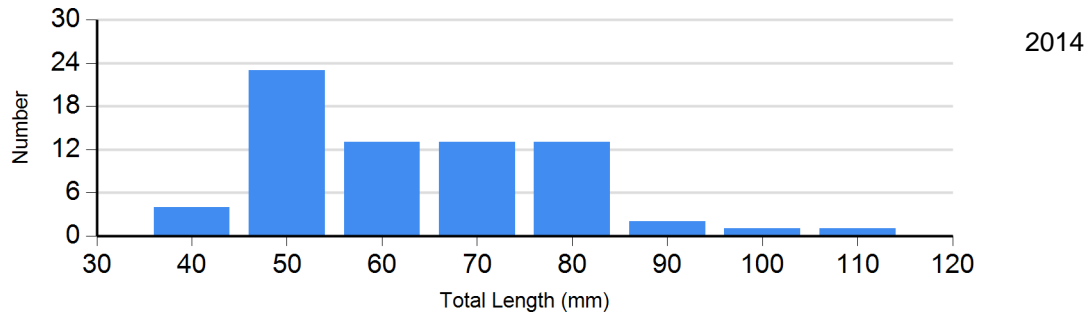
Species: Brown Trout

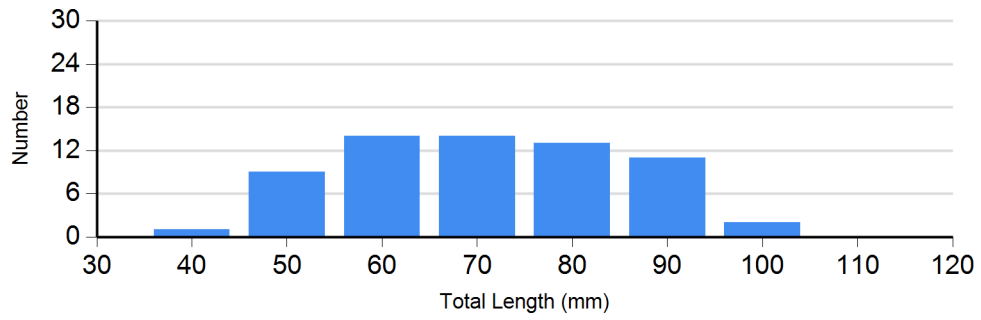


Site: 2211
Species: Creek Chub

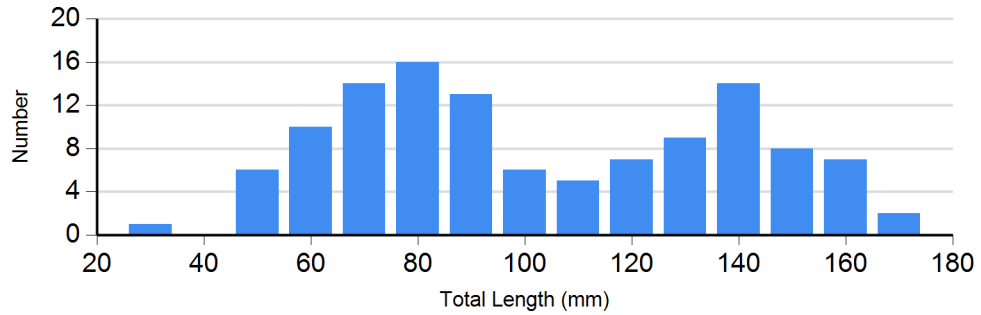
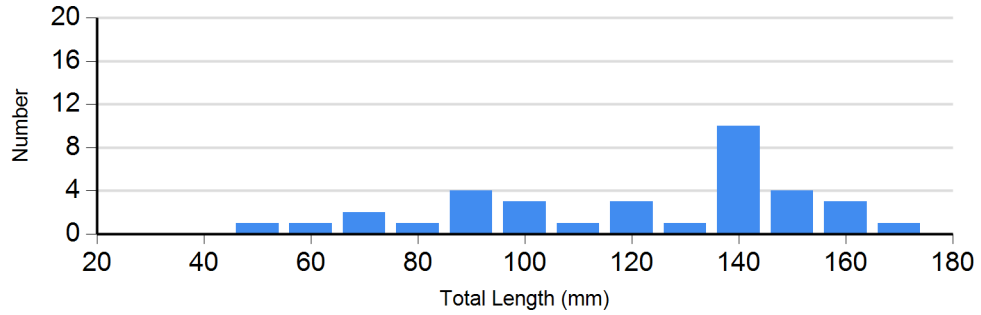


Site: 2211
Species: Longnose Dace

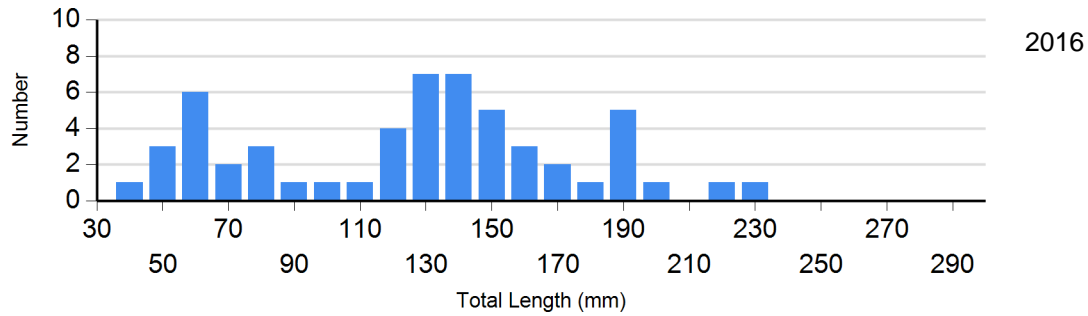
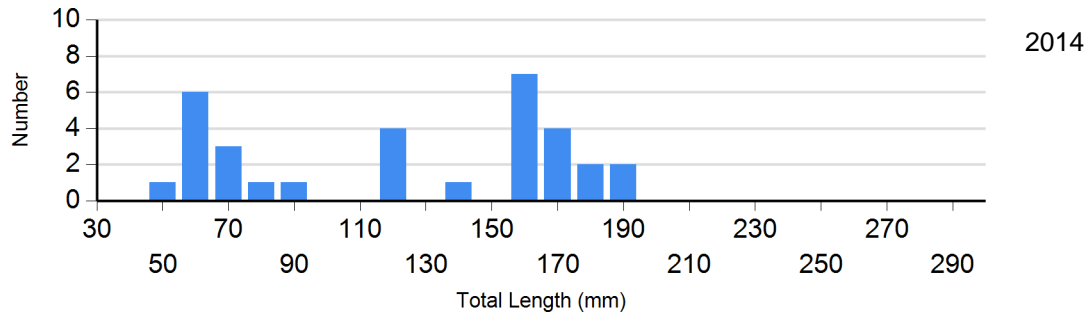




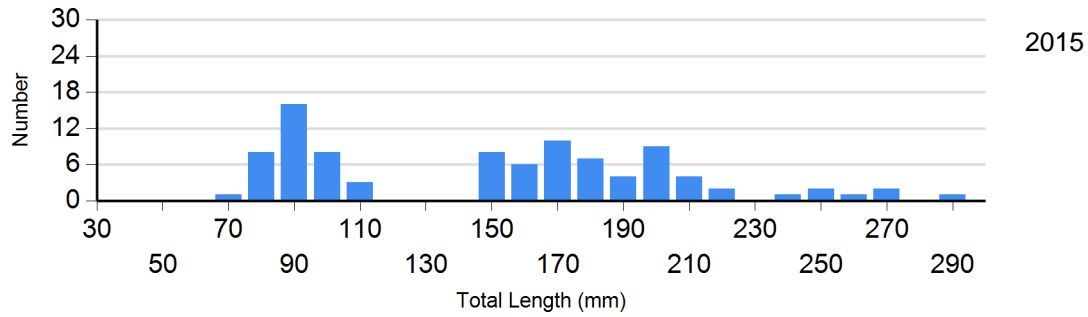
Site: 2211
Species: Mountain Sucker

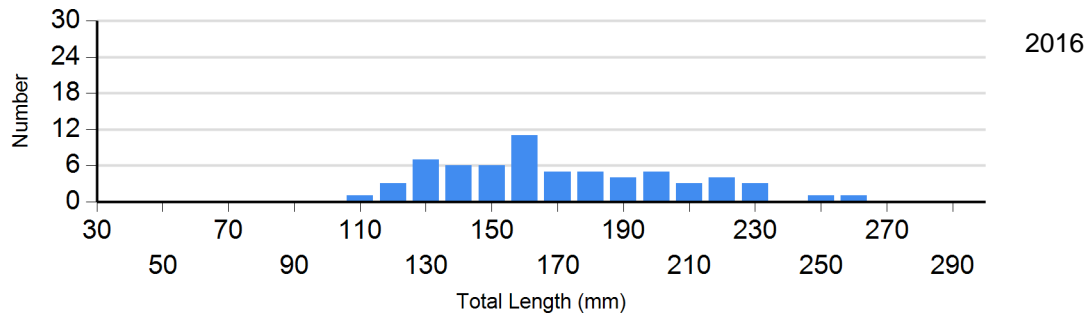


Site: 2211
Species: White Sucker

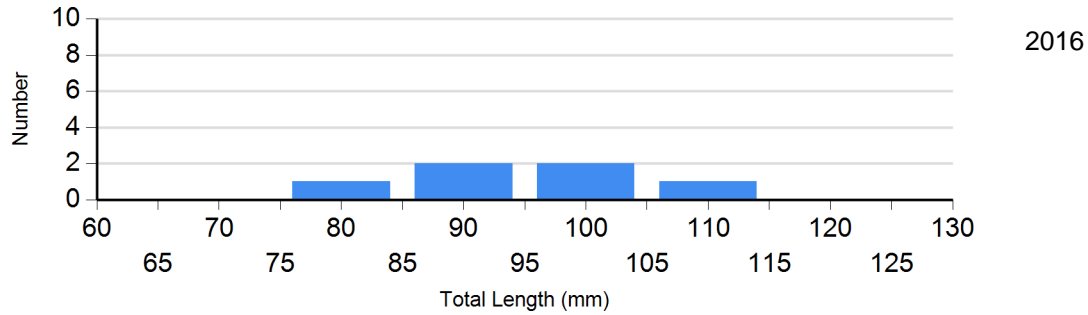
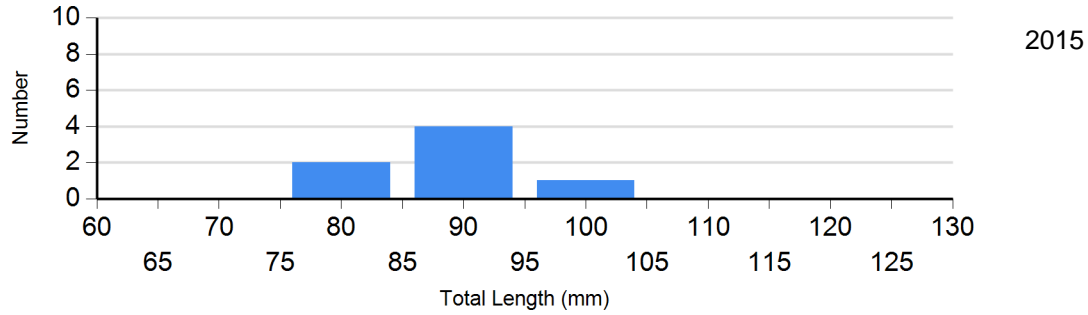


Site: 2460
Species: Brook Trout





Site: 2460
Species: Longnose Dace



Site: 2460
Species: Mountain Sucker

