

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Elk Creek, Meade County
09-0015-00
2014

Table 1. Population and Biomass Estimates for Elk Creek

Site Number: 2211
Site Midpoint (Latitude, Longitude): 44.29475339, -103.52310349
Survey Completed by: South Dakota Game, Fish and Parks
Stream Classification: BK1, BR3

Date Sampled: 09/04/2014
Site Length (m): 100
Mean Width (m): 3.8
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	3	3	4	3	80	7	30	32	5.81	48	163.0	81.5
Brook Trout	>=200mm	14	14	15	14	373	71	140	151	63.38	225	249.1	190.4
Brook Trout	All	17	17	18	17	453	80	170	183	71.46	274	233.9	176.8
Brown Trout	>=200mm	1	1	1	1	27	4	10	11	3.83	16	236.0	161.0
Brown Trout	All	2	2	3	2	53	9	20	22	7.66	32	163.5	161.0
Creek Chub	All	28	29	32	28	772	23	290	313	20.92	467	71.4	30.3
Longnose Dace	All	70	109	166	70	2903	35	1090	1176	31.11	1754	67.5	12.0
Mountain Sucker	All	35	36	39	35	959	34	360	388	30.03	579	125.1	35.1
White Sucker	All	32	33	36	32	879	46	330	356	41.24	531	126.8	52.6

Site Number: 2268
Site Midpoint (Latitude, Longitude): 44.30193266, -103.55322368
Survey Completed by: South Dakota Game, Fish and Parks
Stream Classification: BK3

Date Sampled: 07/18/2014
Site Length (m): 100
Mean Width (m): 6.2
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	3	3	3	3	48	8	30	20	7.44	48	230.7	173.0
Brook Trout	All	3	3	3	3	48	8	30	20	7.44	48	230.7	173.0
Mountain Sucker	All	38	40	45	38	642	18	400	260	15.99	644	120.4	27.9

Site Number: 2309

Site Midpoint (Latitude, Longitude): 44.29773491, -103.58253202

Survey Completed by:

Stream Classification: BK2

Date Sampled: 07/14/2014

Site Length (m): 100

Mean Width (m): 6.0

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	7	7	9	7	116	19	70	47	17.32	113	244.6	167.3
Brook Trout	All	7	7	9	7	116	19	70	47	17.32	113	244.6	167.3
Longnose Dace	All	84	91	100	84	1508	23	910	611	20.19	1464	75.4	15.0
Mountain Sucker	All	215	226	236	216	3744	71	2260	1516	63.51	3636	170.8	19.0
White Sucker	All	38	52	78	38	861	28	520	349	24.64	837	122.2	32.0

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 Elk Creek, 2004-2014

Site 2211

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Sep 04, 2014	3	3-4	
Brook Trout >=200mm	Sep 04, 2014	14	14-15	BK1
Brown Trout >=200mm	Sep 04, 2014	1	1-1	BR3
Creek Chub	Sep 04, 2014	29	28-32	
Longnose Dace	Sep 04, 2014	109	70-166	
Mountain Sucker	Sep 04, 2014	36	35-39	
White Sucker	Sep 04, 2014	33	32-36	

Site 2268

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout >=200mm	Jul 18, 2014	3	3-3	BK3
Mountain Sucker	Jul 18, 2014	40	38-45	

Site 2309

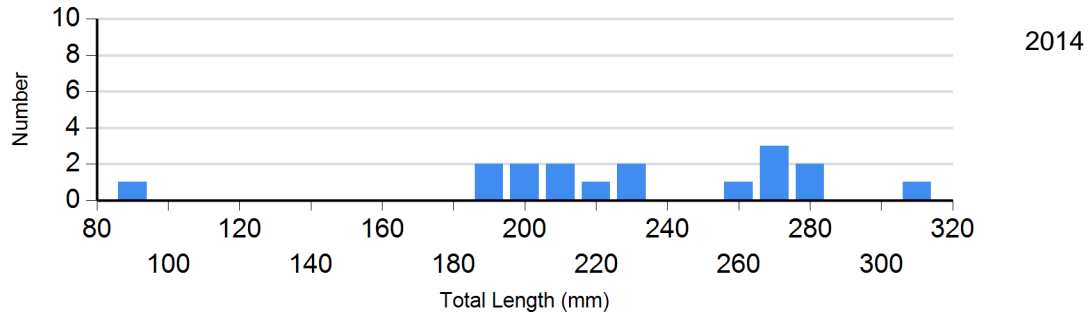
Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout >=200mm	Jul 14, 2014	7	7-9	BK2
Longnose Dace	Jul 14, 2014	91	84-100	
Mountain Sucker	Jul 13, 2009	218	218-218	
	Jul 14, 2014	226	216-236	
White Sucker	Jul 14, 2014	52	38-78	

Length Frequency Distribution

Length frequency histogram of species sampled by year.

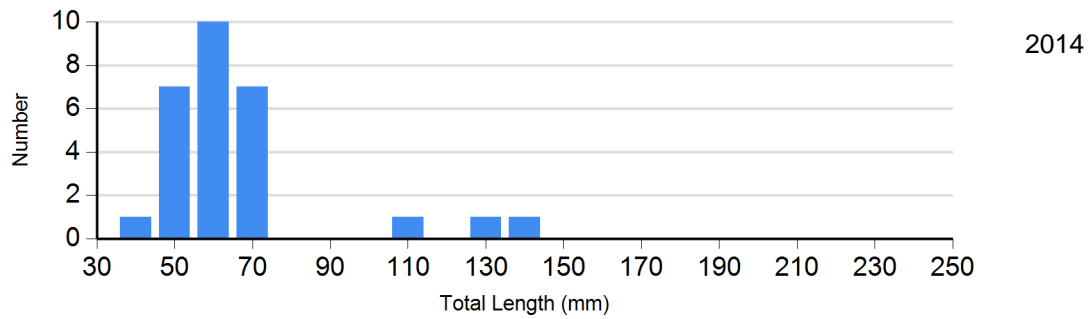
Site: 2211

Species: Brook Trout



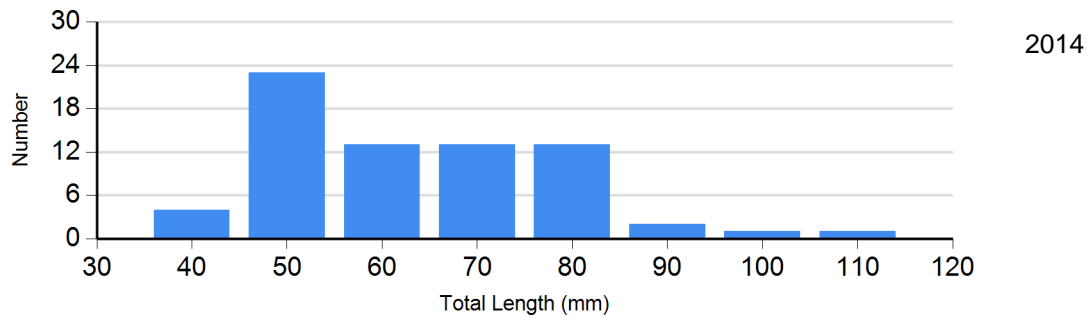
Site: 2211

Species: Creek Chub

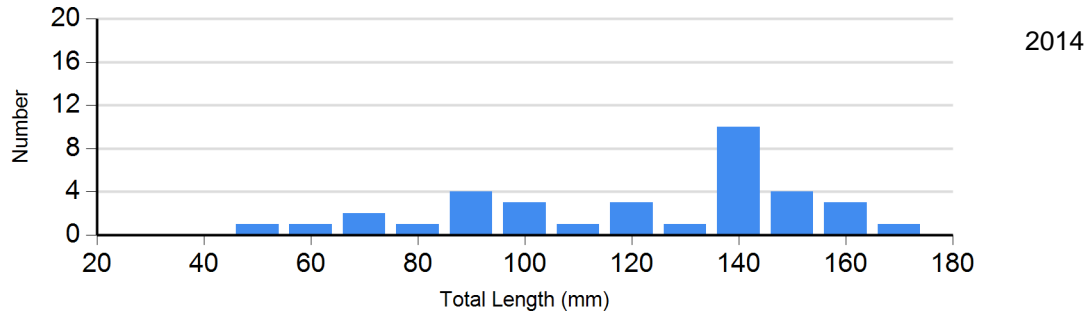


Site: 2211

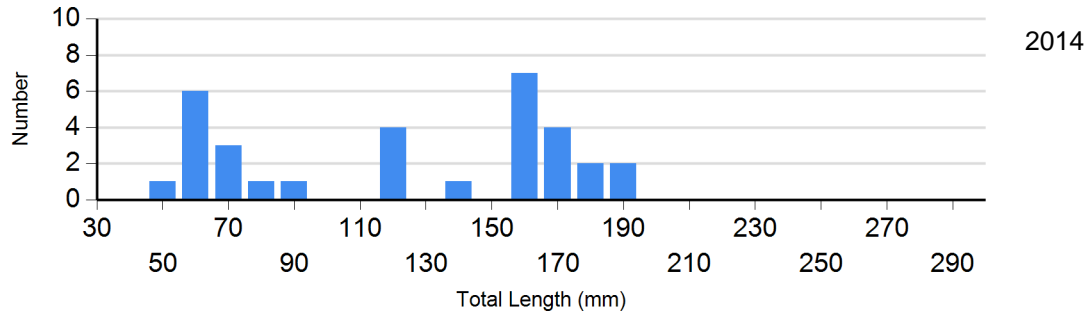
Species: Longnose Dace



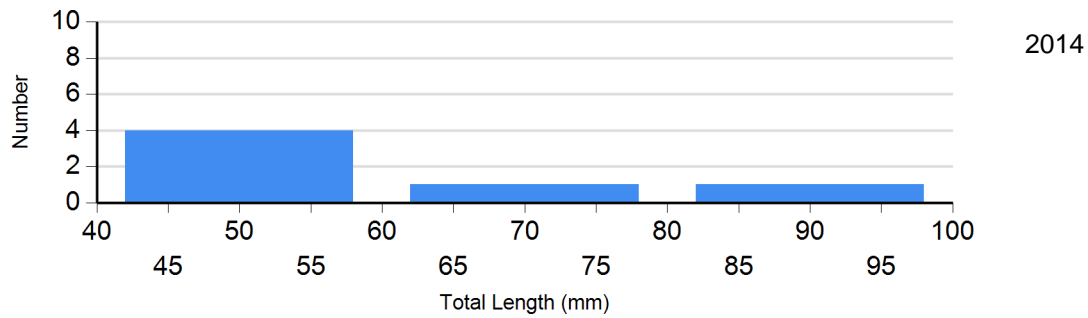
Site: 2211
Species: Mountain Sucker



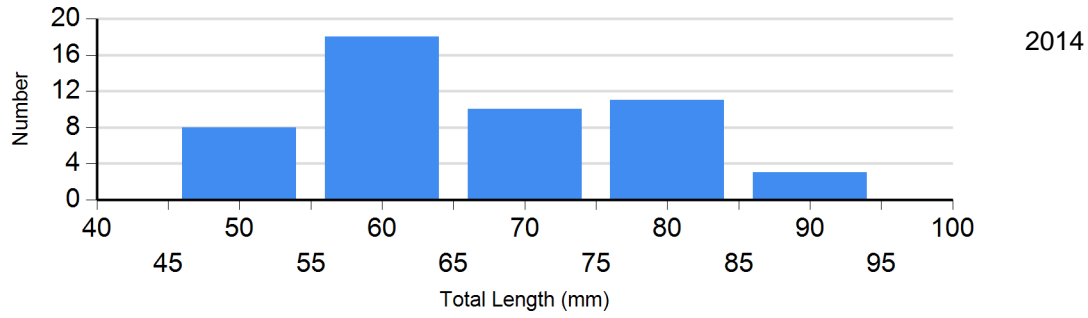
Site: 2211
Species: White Sucker



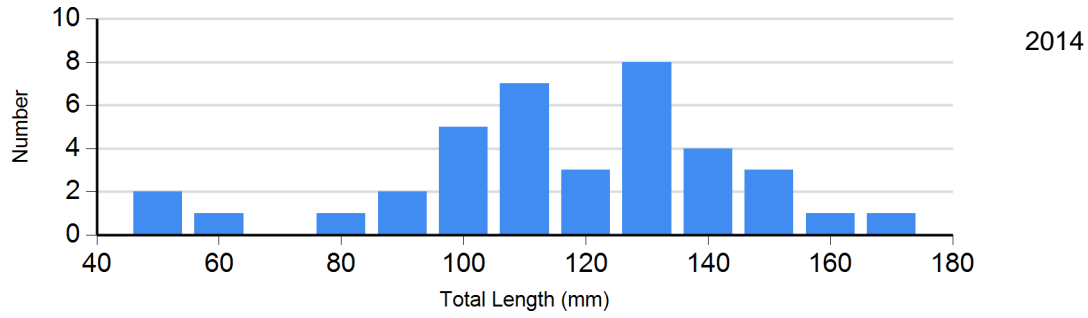
Site: 2268
Species: Creek Chub



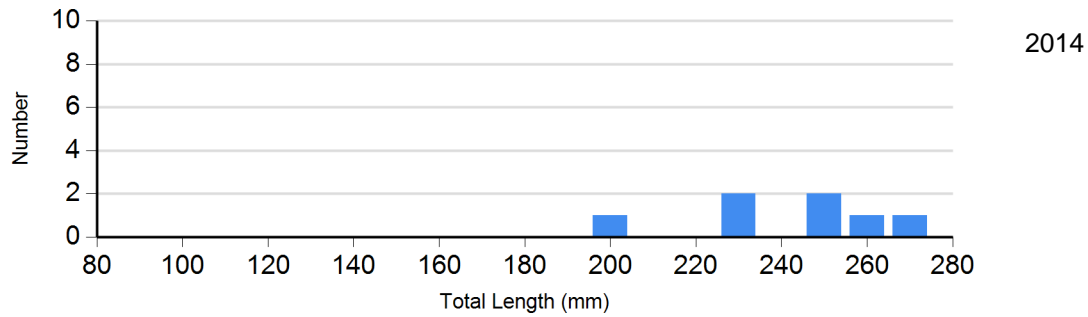
Site: 2268
Species: Longnose Dace



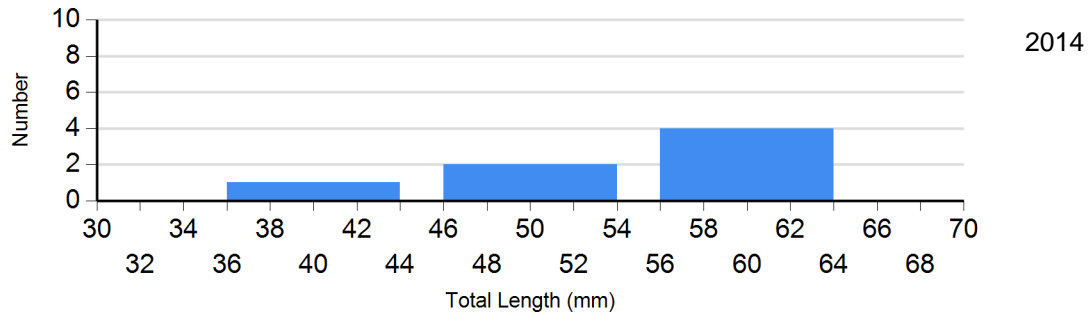
Site: 2268
Species: Mountain Sucker



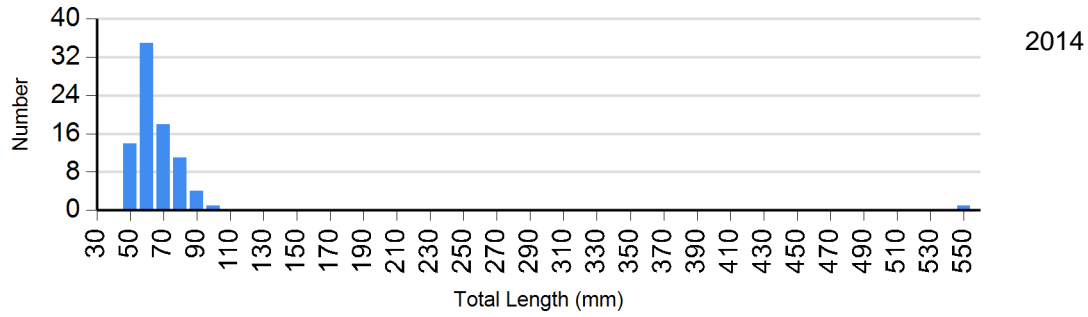
Site: 2309
Species: Brook Trout



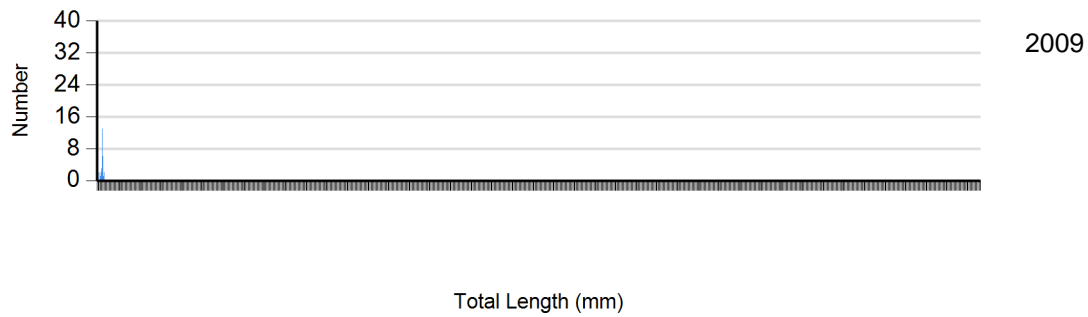
Site: 2309
Species: Creek Chub

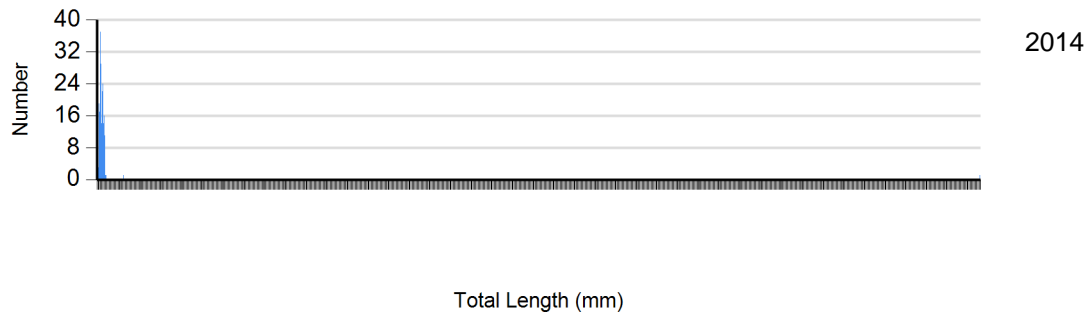


Site: 2309
Species: Longnose Dace



Site: 2309
Species: Mountain Sucker





Site: 2309
Species: White Sucker

