

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Boxelder - Middle Fork, Lawrence County
09-0070-00
2014

Table 1. Population and Biomass Estimates for Boxelder - Middle Fork

Site Number: 28
Site Midpoint (Latitude, Longitude): 44.21285014, -103.61750293
Survey Completed by: South Dakota Game, Fish and Parks
Stream Classification: BK2

Date Sampled: 08/11/2014
Site Length (m): 100
Mean Width (m): 2.3
Number of Pass: 3
Conductivity (umhos/cm): 104
pH: 8.3
Water Temperature (C): 14.0
Voltage: 350

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	45	47	51	45	2012	47	470	815	41.60	756	109.6	23.2
Brook Trout	>=200mm	4	4	4	4	171	23	40	69	20.29	64	224.8	132.8
Brook Trout	All	49	51	55	49	2183	74	510	884	65.98	821	119.0	33.9
Longnose Dace	All	113	153	195	113	6549	46	1530	2652	40.93	2462	67.3	7.0
Mountain Sucker	All	2	2	2	2	86	2	20	35	1.53	32	120.0	20.0
White Sucker	All	4	8	42	4	342	3	80	139	2.45	129	62.0	8.0
Yellow Perch	All	2	2	3	2	86	1	20	35	0.69	32	89.5	9.0

Site Number: 150
Site Midpoint (Latitude, Longitude): 44.19781397, -103.70026584
Survey Completed by:
Stream Classification: BK0

Date Sampled: 06/11/2014
Site Length (m): 100
Mean Width (m): 1.9
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)
Brook Trout	<200mm	52	52	53	52	2777	57	520	1125	50.70	837	106.4	20.4
Brook Trout	All	52	52	53	52	2777	57	520	1125	50.70	837	106.4	20.4
White Sucker	All	2	2	3	2	107	5	20	43	4.39	32	175.0	46.0

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 Boxelder - Middle Fork, 2004-2014

Site 28

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Aug 11, 2014	47	45-51	
Brook Trout >=200mm	Aug 11, 2014	4	4-4	BK2
Longnose Dace	Aug 11, 2014	153	113-195	
Mountain Sucker	Aug 11, 2014	2	2-2	
White Sucker	Aug 11, 2014	8	4-42	
Yellow Perch	Aug 11, 2014	2	2-3	

Site 150

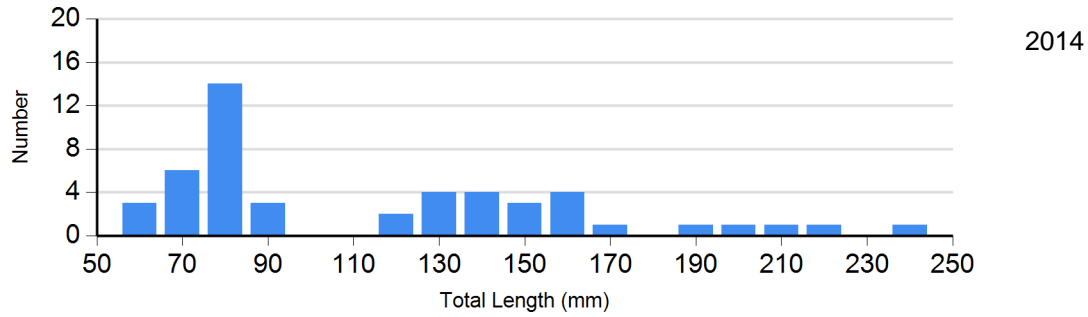
Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jun 11, 2014	52	52-53	
White Sucker	Jun 11, 2014	2	2-3	

Length Frequency Distribution

Length frequency histogram of species sampled by year.

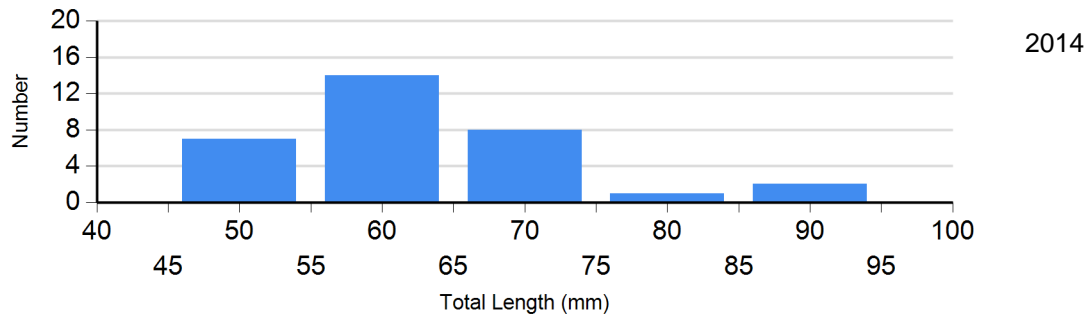
Site: 28

Species: Brook Trout



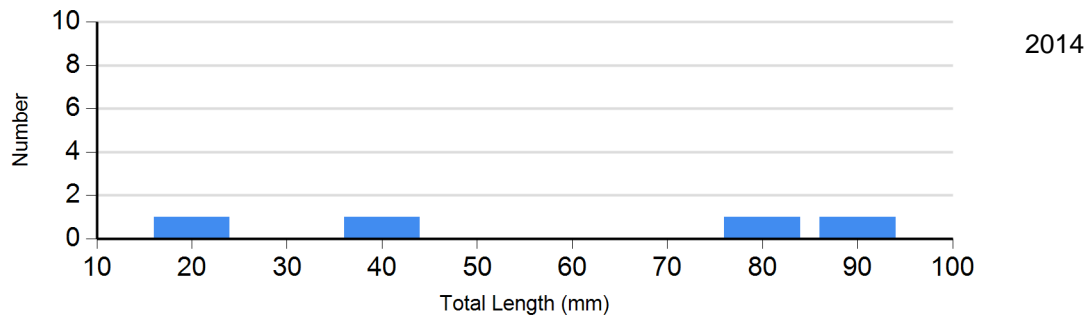
Site: 28

Species: Longnose Dace

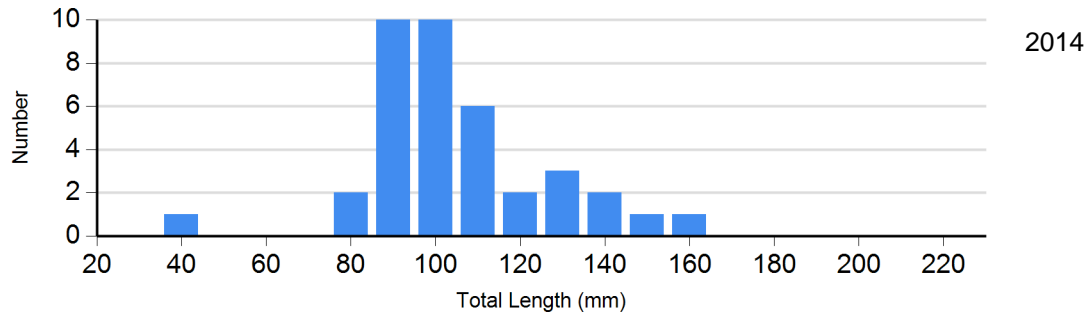
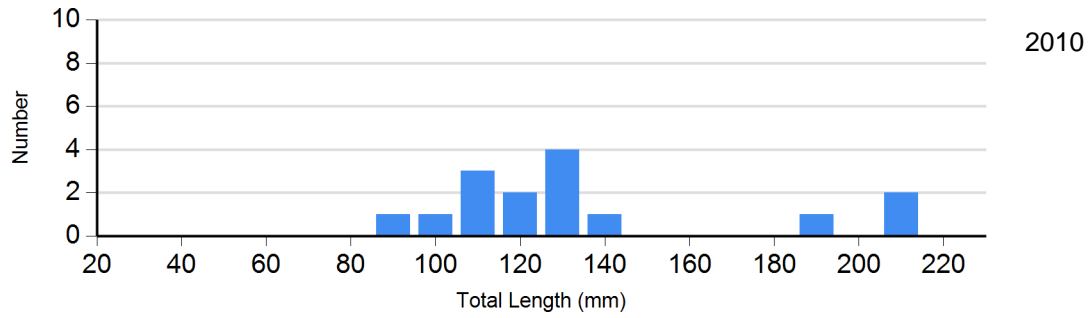


Site: 28

Species: White Sucker



Site: 150
Species: Brook Trout



Site: 150
Species: Longnose Dace

