

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Hay Creek (Trib. of Boxelder), Lawrence County
09-0064-00
2017

Table 1. Population and Biomass Estimates for Hay Creek (Trib. of Boxelder)

Site Number: 2
Site Midpoint (Latitude, Longitude): 44.23033342, -103.57592412
Survey Completed by: South Dakota Game, Fish and Parks
Stream Classification: BK0, BR3

Date Sampled: 05/09/2017
Site Length (m): 100
Mean Width (m): 1.7
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	24	24	26	24	1437	31	240	582	27.35	386	114.1	21.3
Brook Trout	All	24	24	26	24	1437	31	240	582	27.35	386	114.1	21.3
Brown Trout	<200mm	12	12	12	12	719	15	120	291	13.41	193	118.8	20.9
Brown Trout	>=200mm	1	1	1	1	60	7	10	24	6.36	16	220.0	119.0
Brown Trout	All	13	13	13	13	778	23	130	315	20.21	209	126.6	29.1
Longnose Dace	All	66	71	79	66	4251	60	710	1722	53.78	1142	73.0	14.2

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 Hay Creek (Trib. of Boxelder), 2007-2017

Site 2

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	May 13, 2015	27	25-33	
	May 09, 2017	24	24-26	
Brook Trout >=200mm	May 13, 2015	3	3-3	BK2
Brown Trout <200mm	May 09, 2017	12	12-12	
Brown Trout >=200mm	May 09, 2017	1	1-1	BR3
Longnose Dace	May 13, 2015	4	4-7	
	May 09, 2017	71	66-79	

Site 87

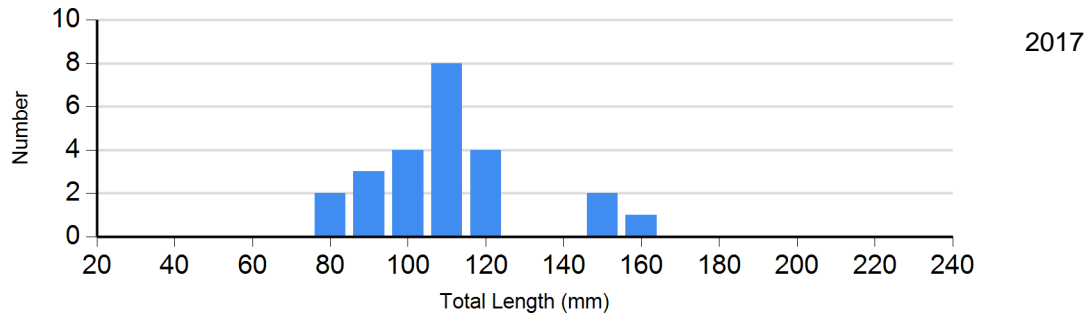
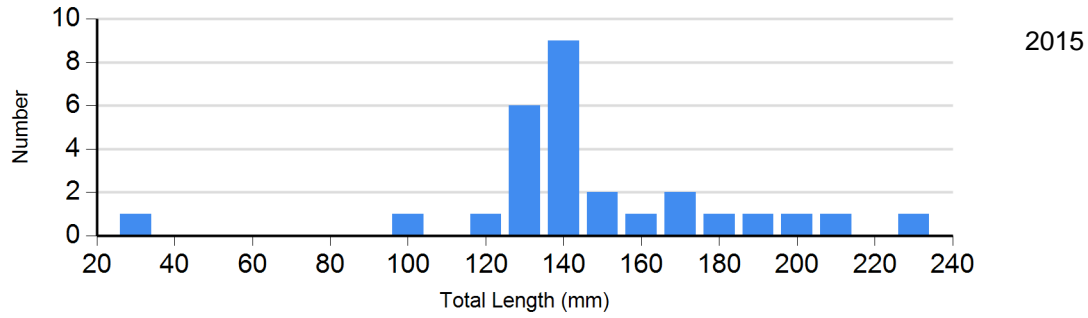
Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jun 05, 2014	4	4-4	
	Jun 02, 2016	1	1-1	
Brook Trout >=200mm	Jun 05, 2014	1	1-2	BK2
Longnose Dace	Jun 05, 2014	10	8-19	
White Sucker	Jun 05, 2014	3	3-4	
	Jun 02, 2016	11	9-21	

Length Frequency Distribution

Length frequency histogram of species sampled by year.

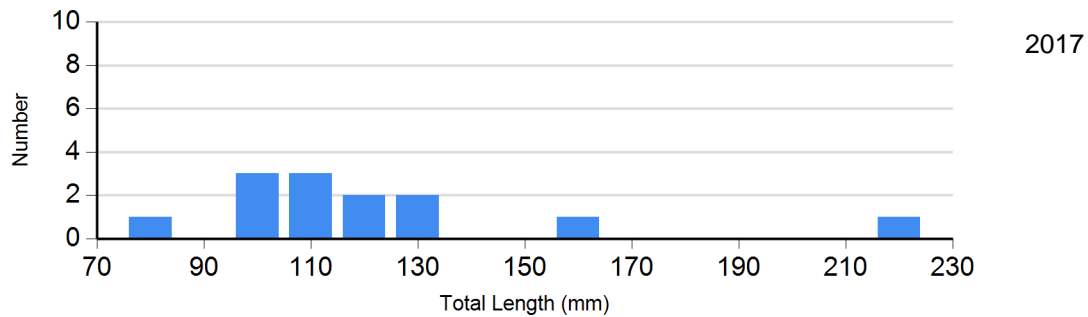
Site: 2

Species: Brook Trout

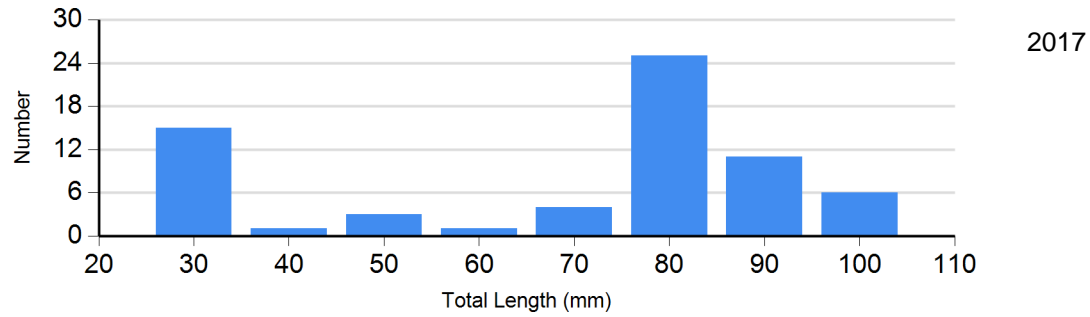
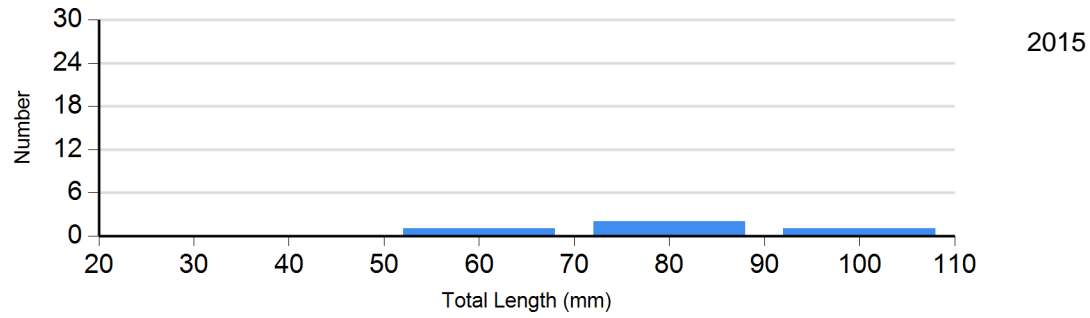


Site: 2

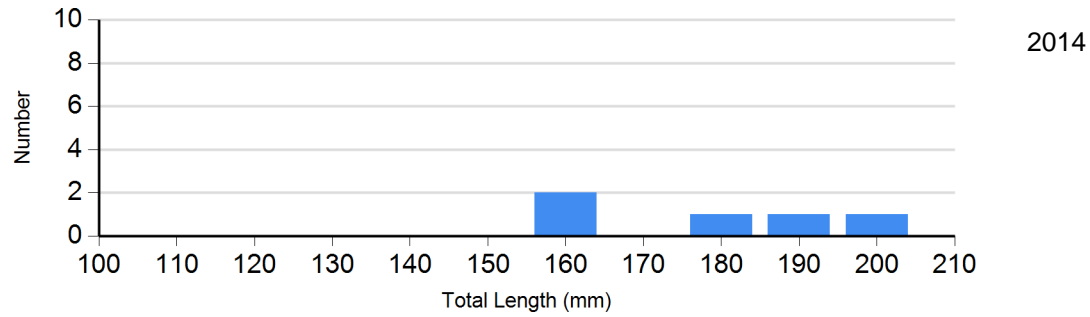
Species: Brown Trout



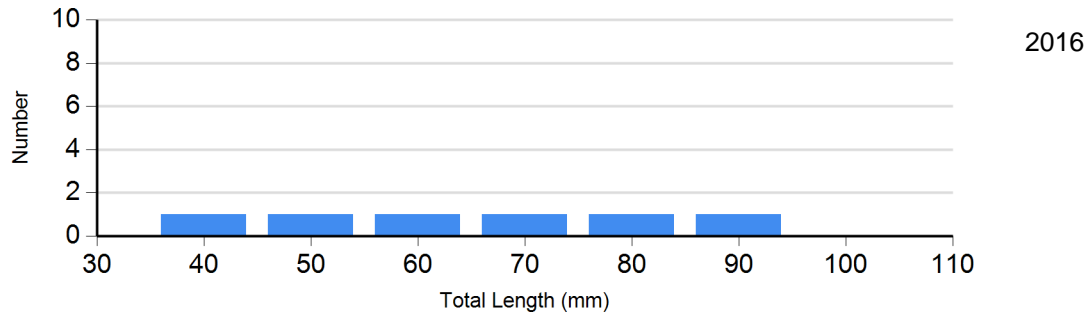
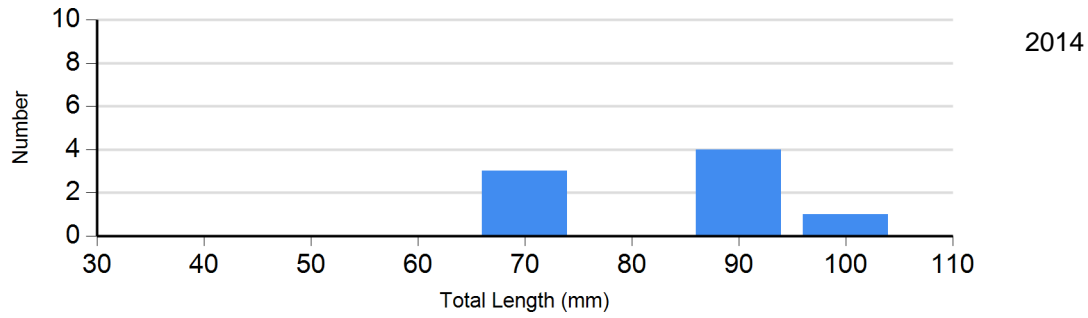
Site: 2
Species: Longnose Dace



Site: 87
Species: Brook Trout



Site: 87
Species: Longnose Dace



Site: 87
Species: White Sucker

