

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Tillson Creek, Lawrence County
09-0081-00
2017

Table 1. Population and Biomass Estimates for Tillson Creek

Site Number: 57
Site Midpoint (Latitude, Longitude): 44.17390335, -103.79870822
Survey Completed by: South Dakota Game, Fish and Parks
Stream Classification: BK0, BR2

Date Sampled: 05/10/2017
Site Length (m): 100
Mean Width (m): 2.6
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	54	54	56	54	2084	73	540	844	64.96	869	117.4	34.9
Brook Trout	All	54	54	56	54	2084	73	540	844	64.96	869	117.4	34.9
Brown Trout	<200mm	26	26	27	26	1004	36	260	406	32.31	418	122.7	36.1
Brown Trout	>=200mm	2	2	2	2	77	17	20	31	14.75	32	250.5	214.0
Brown Trout	All	28	28	28	28	1081	59	280	438	52.87	451	131.8	54.8
Longnose Dace	All	58	92	147	58	3551	55	920	1438	49.32	1480	84.8	15.6
Mountain Sucker	All	6	6	6	6	232	7	60	94	6.44	97	139.2	31.2
White Sucker	All	6	6	6	6	232	18	60	94	15.75	97	182.8	76.2

Site Number: 57
Site Midpoint (Latitude, Longitude): 44.17390335, -103.79870822
Survey Completed by: South Dakota Game, Fish and Parks
Stream Classification: BK1

Date Sampled: 05/10/2017
Site Length (m): 100
Mean Width (m): 1.2
Number of Pass: 3
Conductivity (umhos/cm): 436
pH:
Water Temperature (C): 10.2
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	96	97	100	96	8114	259	970	3286	231.16	1561	122.4	31.9
Brook Trout	>=200mm	7	7	7	7	586	56	70	237	49.67	113	207.0	95.0
Brook Trout	All	103	104	107	103	8700	332	1040	3523	296.16	1673	128.2	38.1

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 Tillson Creek, 2007-2017

Site 57

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Sep 18, 2015	55	55-56	
	May 10, 2017	97	96-100	
	May 10, 2017	54	54-56	
Brook Trout >=200mm	Sep 18, 2015	4	4-4	BK2
	May 10, 2017	7	7-7	BK1
Brown Trout <200mm	Sep 18, 2015	19	19-19	
	May 10, 2017	26	26-27	

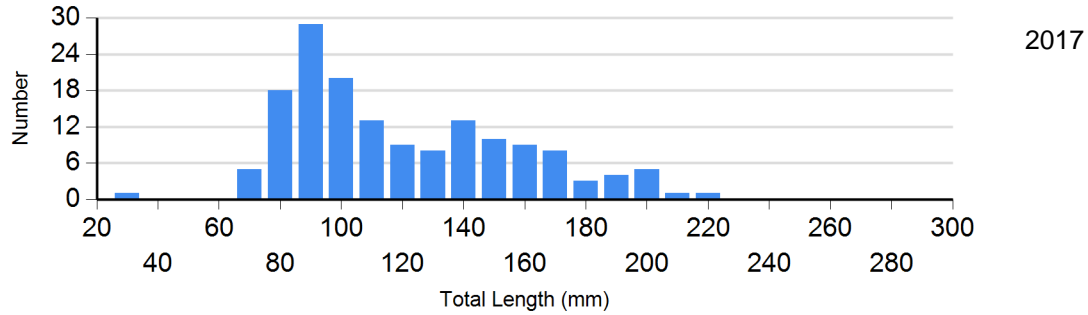
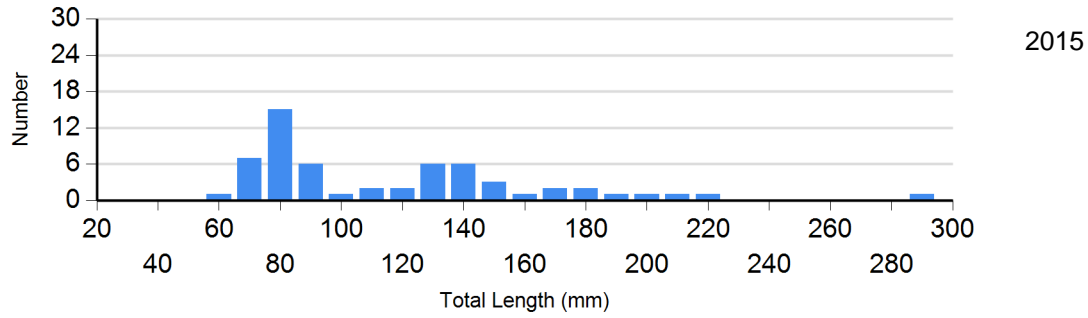
Brown Trout >=200mm	Sep 18, 2015	3	3-4	BR2
	May 10, 2017	2	2-2	BR2
Longnose Dace	Sep 18, 2015	17	18-22	
	May 10, 2017	92	58-147	
Mountain Sucker	Sep 18, 2015	3	3-5	
	May 10, 2017	6	6-6	
White Sucker	May 10, 2017	6	6-6	

Length Frequency Distribution

Length frequency histogram of species sampled by year.

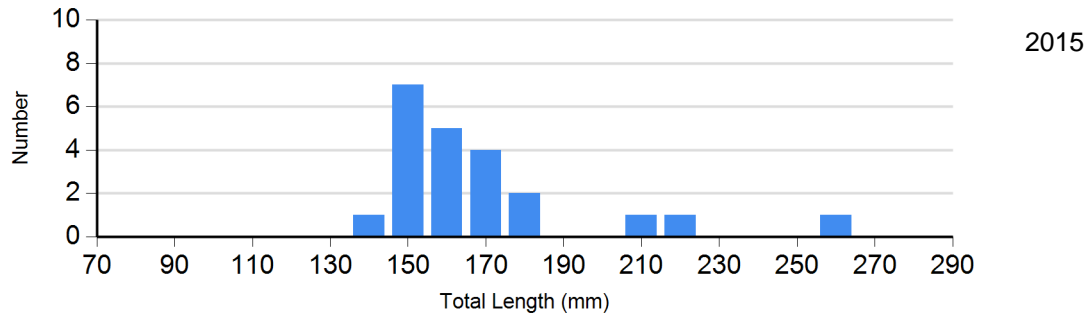
Site: 57

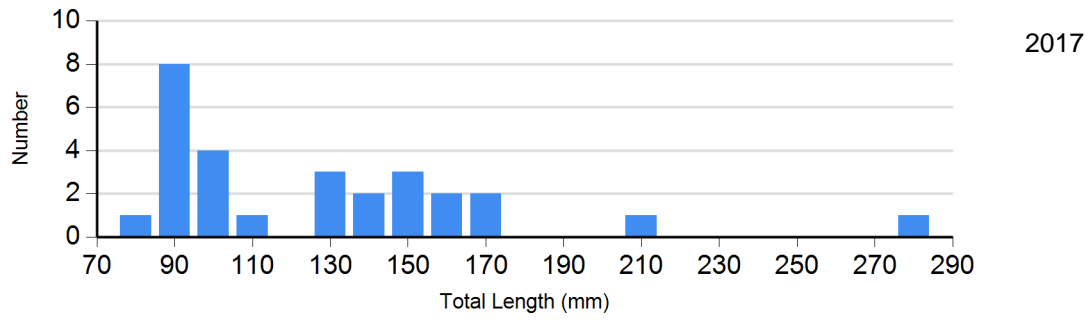
Species: Brook Trout



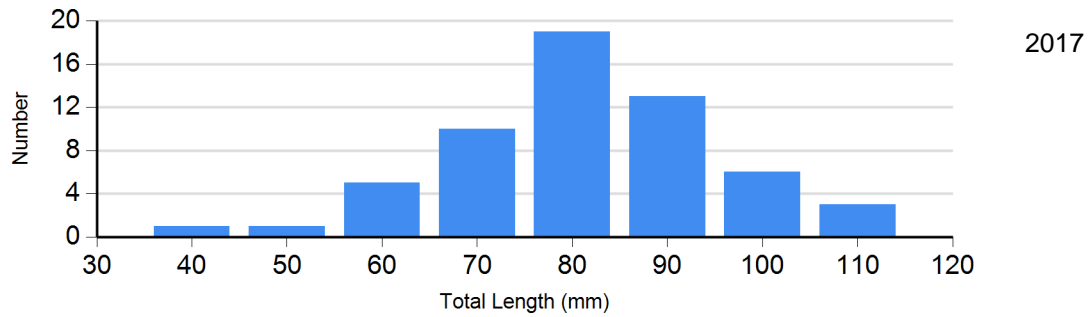
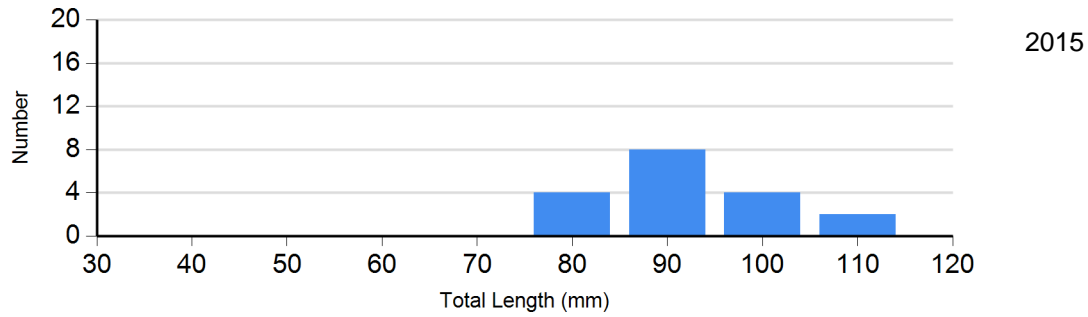
Site: 57

Species: Brown Trout

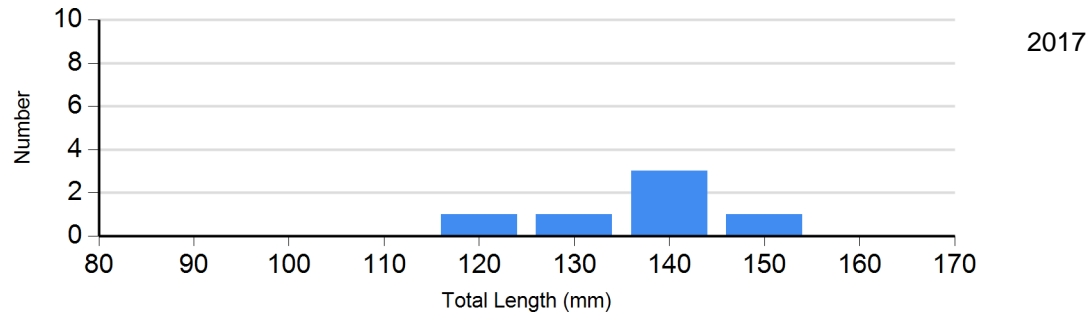




Site: 57
Species: Longnose Dace



Site: 57
Species: Mountain Sucker



Site: 57
Species: White Sucker

