

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Tillson Creek, Lawrence County
09-0081-00
2016

Table 1. Population and Biomass Estimates for Tillson Creek

Site Number: 23	Date Sampled: 05/25/2016	Conductivity (umhos/cm): 312
Site Midpoint (Latitude, Longitude): 44.17794910, -103.77710190	Site Length (m): 100	pH: 7.3
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 3.1	Water Temperature (C): 8.0
Stream Classification: BK0, 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	63	63	64	63	2015	52	630	816	46.16	1014	117.8	25.7
Brook Trout	All	63	63	64	63	2015	52	630	816	46.16	1014	117.8	25.7
Brown Trout	<200mm	33	34	38	33	1087	23	340	440	20.82	547	112.3	21.4
Brown Trout	>=200mm	1	1	2	1	32	4	10	13	3.71	16	215.0	130.0
Brown Trout	All	34	35	39	34	1119	28	350	453	25.30	563	115.3	25.3
Longnose Dace	All	45	49	57	45	1567	24	490	635	21.82	788	88.5	15.6
Mountain Sucker	All	2	2	4	2	64	2	20	26	1.94	32	138.0	34.0

Site Number: 101	Date Sampled: 05/25/2016	Conductivity (umhos/cm): 431
Site Midpoint (Latitude, Longitude): 44.19035870, -103.82889726	Site Length (m): 100	pH: 7.4
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 2.1	Water Temperature (C): 9.4
Stream Classification: BK0, BR0	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	68	68	69	68	3295	98	680	1335	87.47	1094	116.9	29.7

Brook Trout	All	68	68	69	68	3295	98	680	1335	87.47	1094	116.9	29.7
Brown Trout	<200mm	2	2	2	2	97	7	20	39	6.32	32	189.5	73.0
Brown Trout	All	2	2	2	2	97	7	20	39	6.32	32	189.5	73.0

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 Tillson Creek, 2006-2016

Site 23

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Aug 02, 2006	103	103-104	
	Jun 17, 2008	5	5-5	
	Jun 16, 2014	89	88-92	
	May 25, 2016	63	63-64	
Brook Trout >=200mm	Aug 02, 2006	2	2-2	BK2
	Jun 16, 2014	3	3-4	BK2
Brown Trout <200mm	Jun 17, 2008	2	2-2	

Brown Trout <200mm	Jun 16, 2014	6	6-6	
	May 25, 2016	34	33-38	
Brown Trout >=200mm	Jun 16, 2014	1	1-1	BR3
	May 25, 2016	1	1-2	BR3
Longnose Dace	Aug 02, 2006	93	88-100	
	Jun 17, 2008	14	14-14	
	Jun 16, 2014	49	50-68	
	May 25, 2016	49	45-57	
Mountain Sucker	Jun 17, 2008	1	1-1	
	Jun 16, 2014	5	5-5	
	May 25, 2016	2	2-4	

Site 101

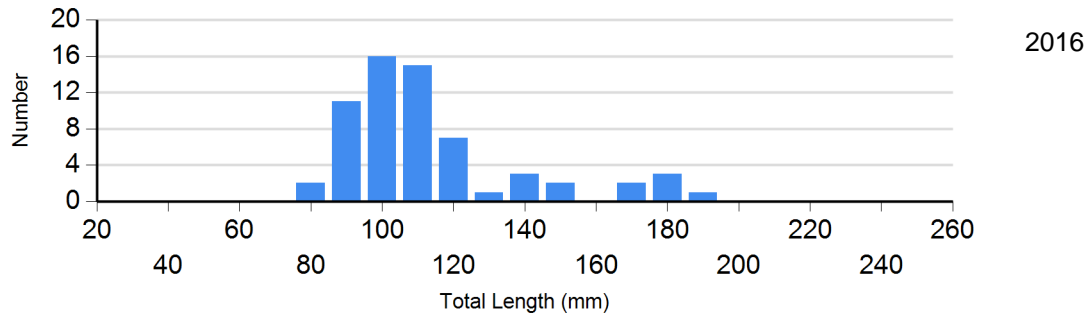
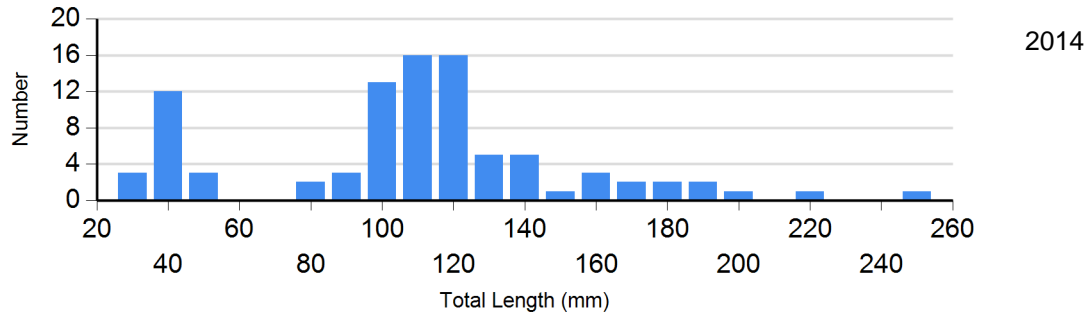
Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jun 30, 2014	82	82-83	
	May 25, 2016	68	68-69	
Brook Trout >=200mm	Jun 30, 2014	1	1-1	BK3

Length Frequency Distribution

Length frequency histogram of species sampled by year.

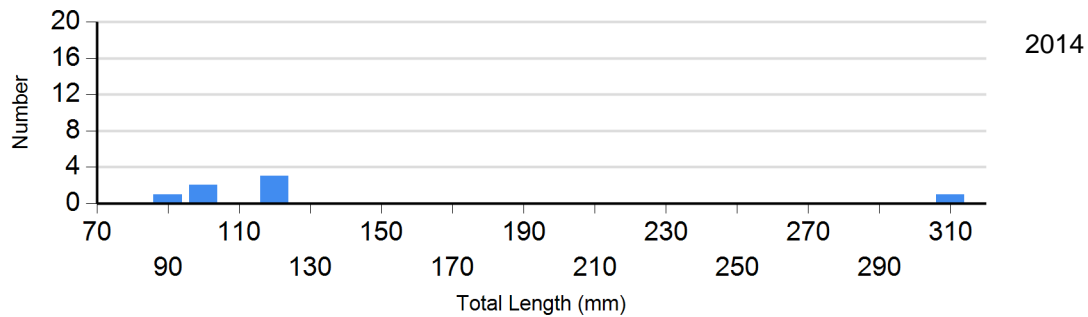
Site: 23

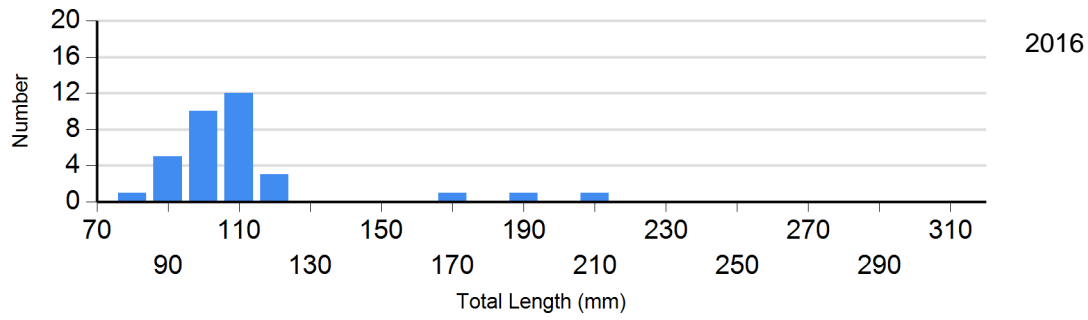
Species: Brook Trout



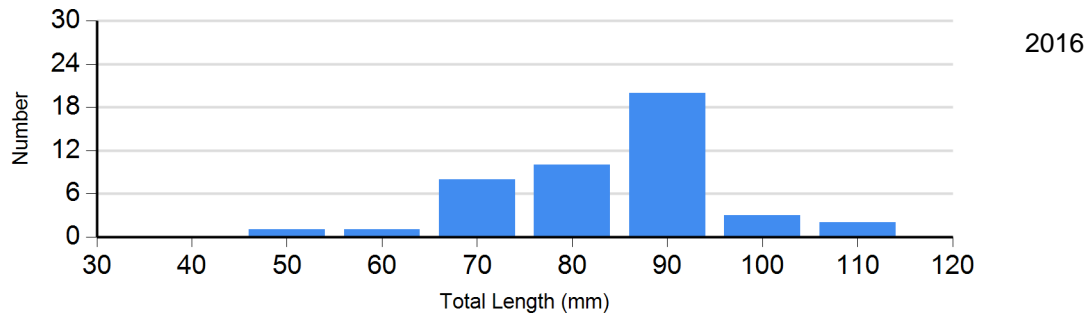
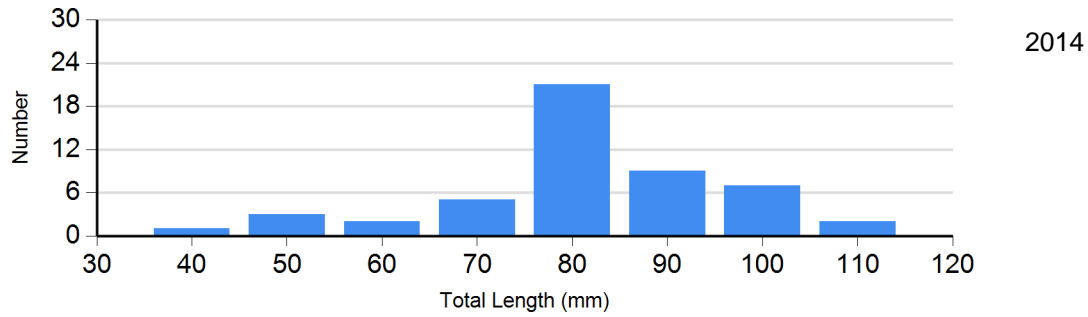
Site: 23

Species: Brown Trout

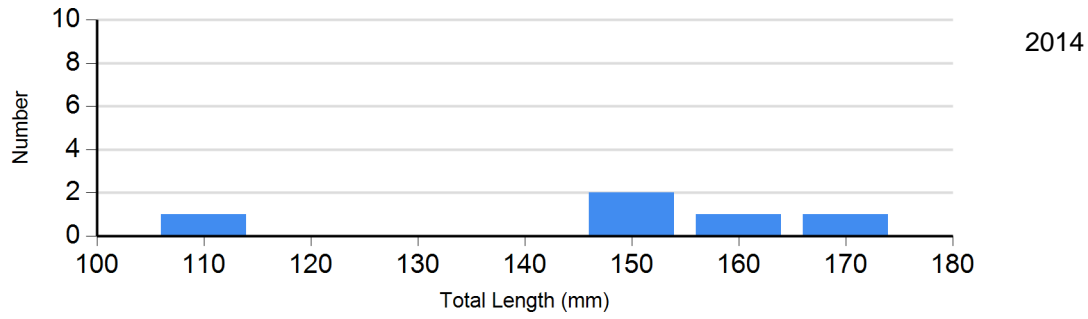




Site: 23
Species: Longnose Dace



Site: 23
Species: Mountain Sucker



Site: 101
Species: Brook Trout

