

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Spring Creek (Trib. of Cheyenne), Pennington County
02-0061-00
2018

Table 1. Population and Biomass Estimates for Spring Creek (Trib. of Cheyenne)

Site Number: 1885

Site Midpoint (Latitude, Longitude): 43.98085728, -103.44241913

Survey Completed by: South Dakota Game, Fish and Parks

Stream Classification: BR3, RB1

Date Sampled: 05/09/2018

Site Length (m): 100

Mean Width (m): 10.2

Number of Pass: 3

Conductivity (umhos/cm):

pH:

Water Temperature (C):

Voltage:

225

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)
Brown Trout	>=200mm	2	2	2	2	20	5	20	8	4.54	32	278.5	259.5
Brown Trout	All	2	2	2	2	20	5	20	8	4.54	32	278.5	259.5
Northern Pike	All	3	3	4	3	29	49	30	12	43.46	48	590.0	1655.0
Rainbow Trout	>=200mm	28	28	29	28	275	78	280	111	69.86	451	301.9	285.0
Rainbow Trout	All	31	31	32	31	304	87	310	123	77.35	499	301.9	285.0
Rock Bass	All	89	200	396	89	1961	77	2000	794	68.53	3218	87.6	39.1
White Sucker	All	70	77	87	70	755	114	770	306	101.50	1239	221.2	150.6

Site Number: 2439

Site Midpoint (Latitude, Longitude): 43.90537261, -103.74603404

Survey Completed by: South Dakota Game, Fish and Parks

Stream Classification: BK1

Date Sampled: 05/31/2018

Site Length (m): 100

Mean Width (m): 1.1

Number of Pass: 3

Conductivity (umhos/cm):

pH:

Water Temperature (C):

Voltage:

14.0

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	64	65	68	64	5909	174	650	2393	155.23	1046	97.0	29.4
Brook Trout	>=200mm	6	6	7	6	545	61	60	221	54.22	97	224.7	111.3
Brook Trout	All	70	71	74	70	6455	317	710	2614	282.85	1142	108.0	49.1

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 Spring Creek (Trib. of Cheyenne), 2008-2018

Site 1885

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brown Trout >=200mm	Aug 16, 2011	18	18-18	BR2
	Jun 27, 2017	14	12-21	BR3
	May 09, 2018	2	2-2	BR3
Creek Chub	Jul 24, 2009	35	35-35	
	Jun 27, 2017	359	323-395	
Golden Shiner	Jul 24, 2009	2	2-2	
Northern Pike	May 09, 2018	3	3-4	

Rainbow Trout <200mm	Aug 16, 2011	9	9-10	
Rainbow Trout >=200mm	Jul 24, 2009	3	3-3	RB2
	Jun 27, 2017	6	6-6	RB2
	May 09, 2018	28	28-29	RB1
Rock Bass	Jul 24, 2009	1	1-1	
	Jun 27, 2017	126	117-136	
	May 09, 2018	200	89-396	
White Sucker	Jul 24, 2009	30	30-30	
	Aug 16, 2011	41	40-45	
	Jun 27, 2017	101	101-103	
	May 09, 2018	77	70-87	

Site 2439

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jul 27, 2009	7	7-7	
	Jun 23, 2014	25	25-25	
	Jun 22, 2016	47	47-48	

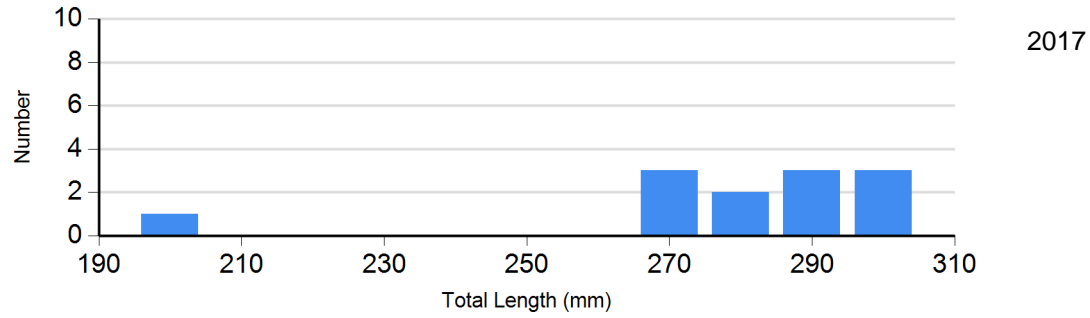
Brook Trout <200mm	Aug 09, 2017	102	98-108	
	May 31, 2018	65	64-68	
Brook Trout >=200mm	Jun 23, 2014	1	1-1	BK2
	Jun 22, 2016	3	3-3	BK2
	May 31, 2018	6	6-7	BK1

Length Frequency Distribution

Length frequency histogram of species sampled by year.

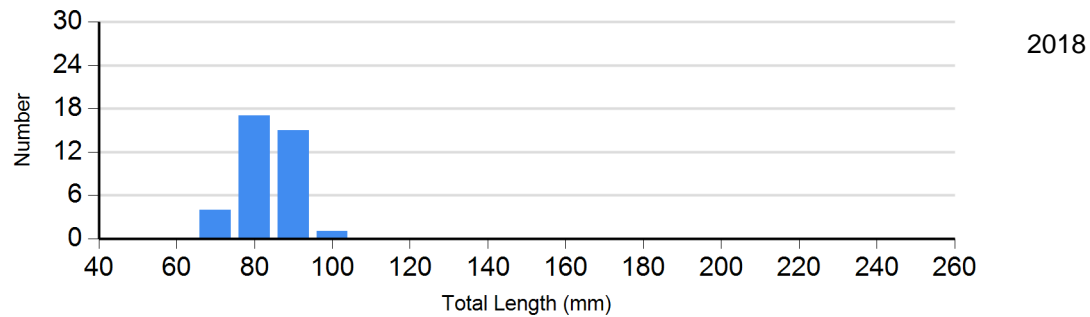
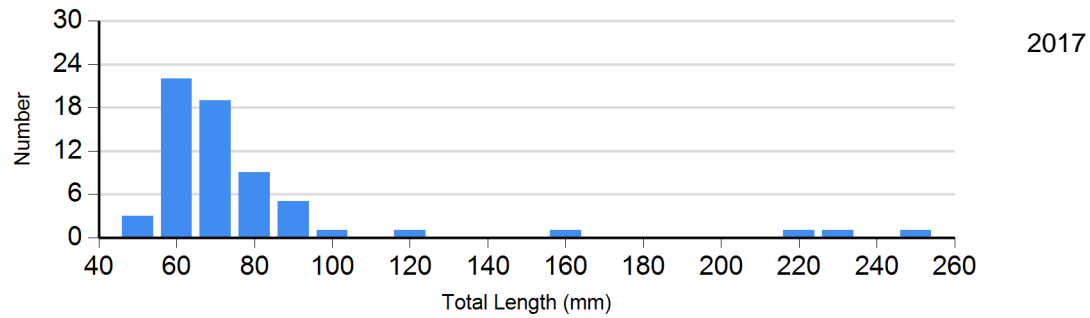
Site: 1885

Species: Brown Trout

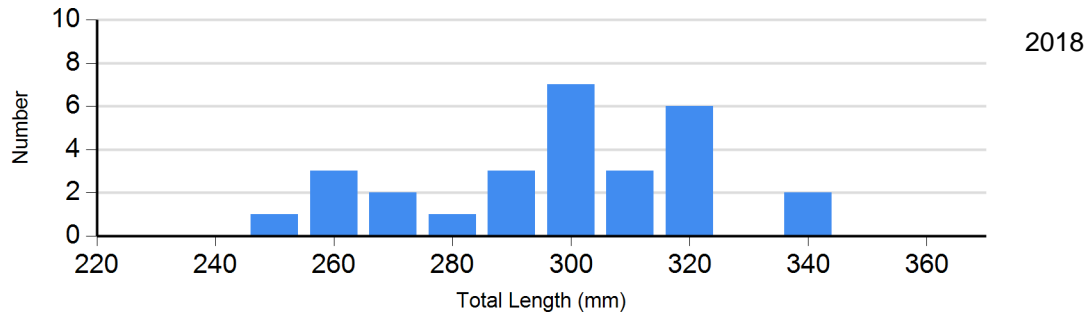
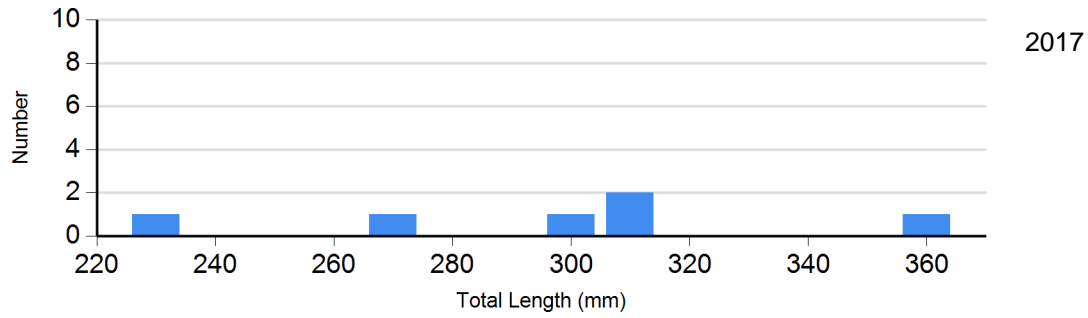


Site: 1885

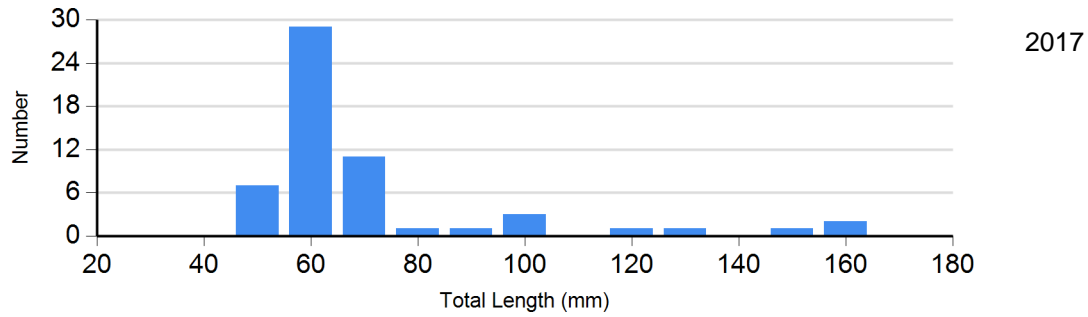
Species: Creek Chub

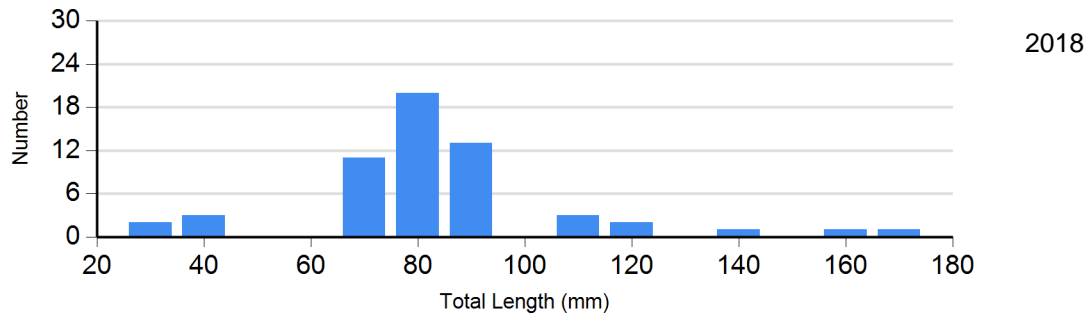


Site: 1885
Species: Rainbow Trout

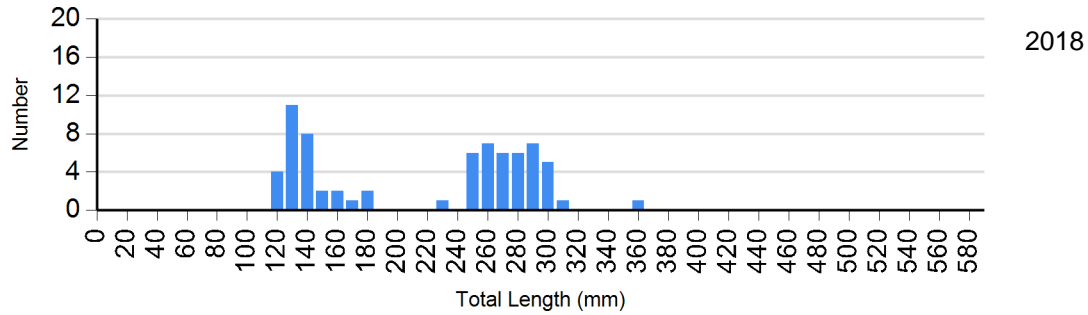
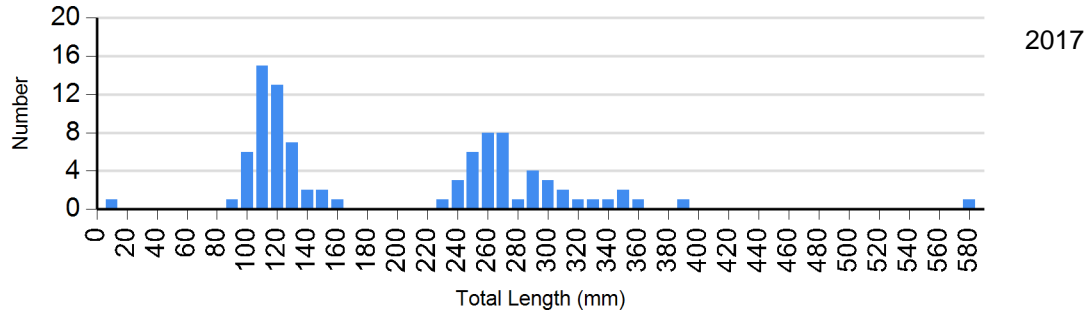


Site: 1885
Species: Rock Bass





Site: 1885
Species: White Sucker



Site: 2439
Species: Brook Trout

