

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Spring Creek (Trib. of Cheyenne), Pennington County
02-0061-00
2011

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

Site Number: 1774	Date Sampled: 08/15/2011	Conductivity (umhos/cm): 306
Site Midpoint (Latitude, Longitude): 43.96901962, -103.37758658	Site Length (m): 100	pH: 7.7
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 8.9	Water Temperature (C): 20.8
Stream Classification: None	Number of Pass: 1	Voltage: 300

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)
Rock Bass	All	21	21	21	21	236	11	210	96	9.68	338	124.6	45.9
White Sucker	All	6	6	6	6	67	17	60	27	14.87	97	286.2	246.8

Site Number: 1864	Date Sampled: 08/15/2011	Conductivity (umhos/cm): 294
Site Midpoint (Latitude, Longitude): 43.98424529, -103.42856922	Site Length (m): 100	pH: 8.3
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 9.2	Water Temperature (C): 25.5
Stream Classification: BR3, RB0	Number of Pass: 3	Voltage: 300

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	5	5	5	5	55	1	50	22	0.48	80	92.0	9.8
Brown Trout	>=200mm	5	5	5	5	55	13	50	22	11.39	80	283.0	233.8
Brown Trout	All	10	10	10	10	109	13	100	44	11.87	161	187.5	121.8
Rainbow Trout	<200mm	4	4	5	4	44	1	40	18	1.00	64	132.8	25.8
Rainbow Trout	All	4	4	5	4	44	1	40	18	1.00	64	132.8	25.8
White Sucker	All	14	14	14	14	153	19	140	62	17.05	225	211.1	125.0

Site Number: 1885
Site Midpoint (Latitude, Longitude): 43.98085728, -103.44241913
Survey Completed by: South Dakota Game, Fish and Parks
Stream Classification: BR2, RB0

Date Sampled: 08/16/2011
Site Length (m): 100
Mean Width (m): 11.0
Number of Pass: 3
Conductivity (umhos/cm): 305
pH:
Water Temperature (C): 20.7
Voltage: 400

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)
Black Bullhead	All	4	4	5	4	36	2	40	15	2.12	64	181.5	65.5
Brown Trout	>=200mm	18	18	18	18	163	35	180	66	31.56	290	267.1	216.9
Brown Trout	All	18	18	18	18	163	35	180	66	31.56	290	267.1	216.9
Rainbow Trout	<200mm	9	9	10	9	81	2	90	33	2.12	145	130.8	29.1
Rainbow Trout	All	9	9	10	9	81	2	90	33	2.12	145	130.8	29.1
White Sucker	All	40	41	45	40	371	49	410	150	43.42	660	237.4	131.0
Yellow Perch	All	1	1	2	1	9	1	10	4	0.89	16	205.0	110.0

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 Spring Creek (Trib. of Cheyenne), 2001-2011

Site 1774

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Black Bullhead	Aug 03, 2009	1	1-1	
Rainbow Trout >=200mm	Aug 03, 2009	1	1-1	RB2
Rock Bass	Aug 15, 2011	21	21-21	
White Sucker	Aug 15, 2011	6	6-6	

Site 1864

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Black Bullhead	Sep 16, 2002	1	1-1	
Brown Trout <200mm	Sep 16, 2002	1	1-1	

Brown Trout <200mm	Aug 15, 2011	5	5-5	
Brown Trout >=200mm	Sep 16, 2002	1	1-1	BR3
	Aug 13, 2009	2	2-2	BR3
	Aug 15, 2011	5	5-5	BR3
Creek Chub	Sep 16, 2002	60	54-70	
Longnose Dace	Sep 16, 2002	40	41-49	
Rainbow Trout <200mm	Aug 15, 2011	4	4-5	
Rock Bass	Sep 16, 2002	5	6-7	
White Sucker	Sep 16, 2002	589	483-695	
	Aug 13, 2009	8	8-8	
	Aug 15, 2011	14	14-14	

Site 1885

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Black Bullhead	Aug 16, 2011	4	4-5	
Brown Trout >=200mm	Aug 16, 2011	18	18-18	BR2
Creek Chub	Jul 24, 2009	35	35-35	

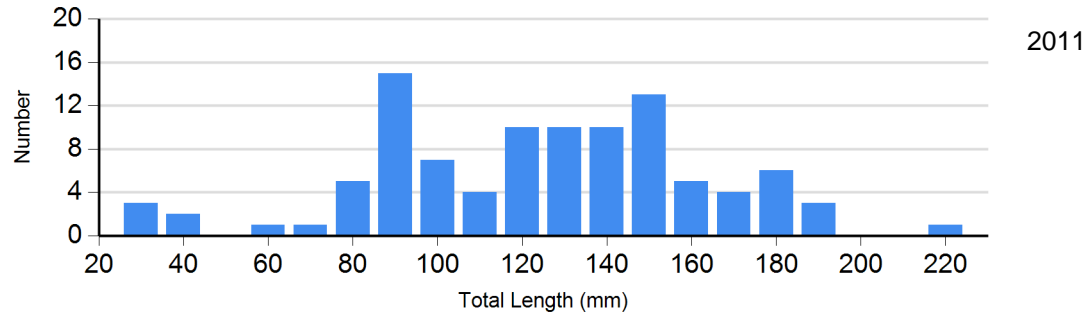
Golden Shiner	Jul 24, 2009	2	2-2	
Rainbow Trout <200mm	Aug 16, 2011	9	9-10	
Rainbow Trout >=200mm	Jul 24, 2009	3	3-3	RB2
Rock Bass	Jul 24, 2009	1	1-1	
White Sucker	Jul 24, 2009	30	30-30	
	Aug 16, 2011	41	40-45	
Yellow Perch	Jul 24, 2009	1	1-1	
	Aug 16, 2011	1	1-2	

Length Frequency Distribution

Length frequency histogram of species sampled by year.

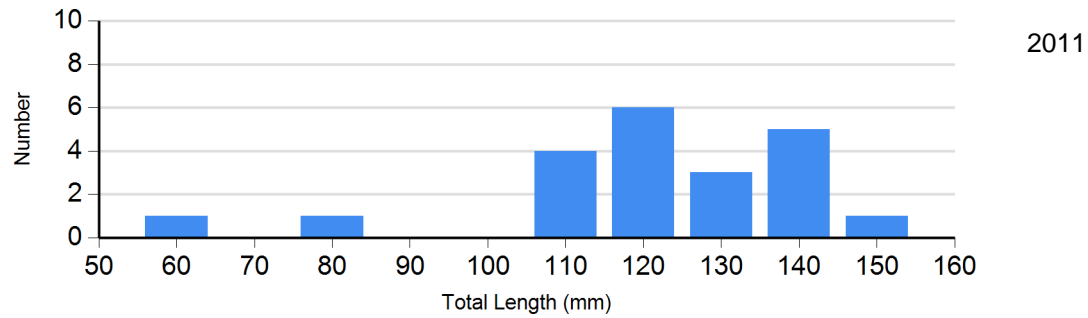
Site: 1774

Species: Creek Chub



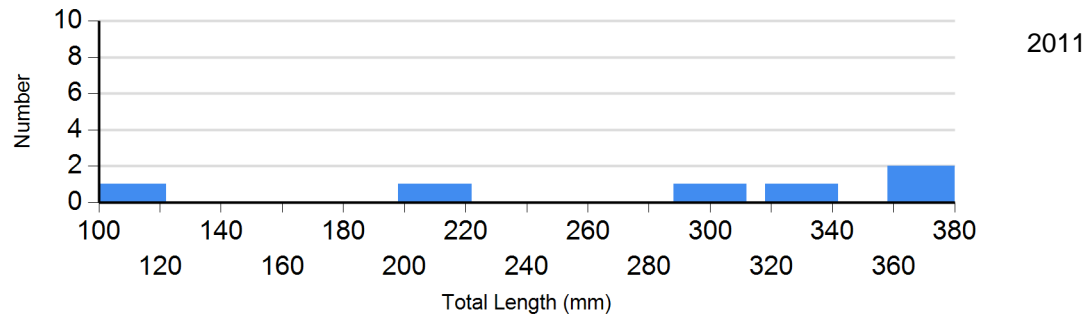
Site: 1774

Species: Rock Bass

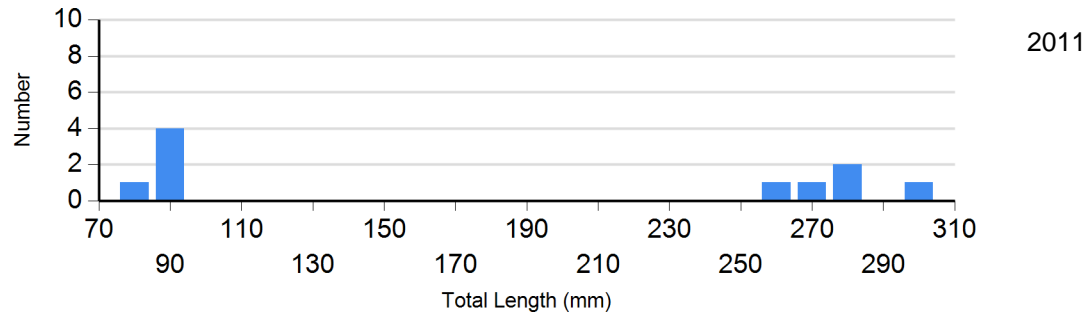


Site: 1774

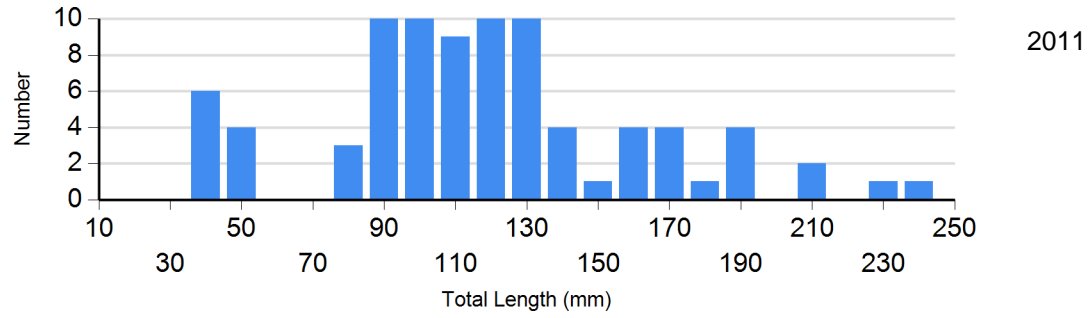
Species: White Sucker



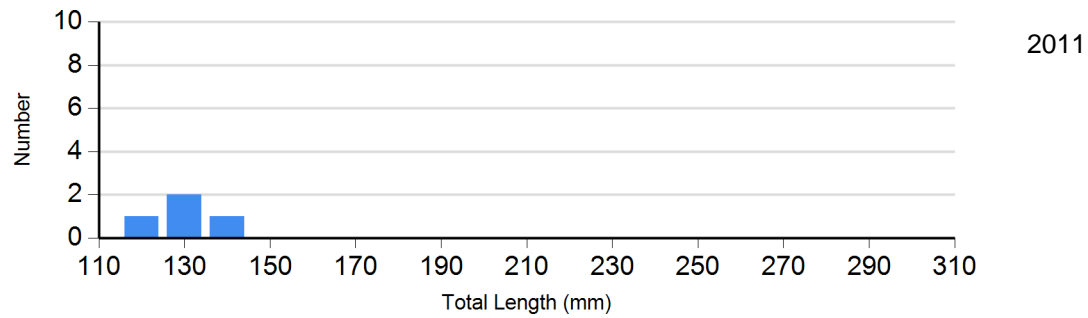
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Species: Brown Trout



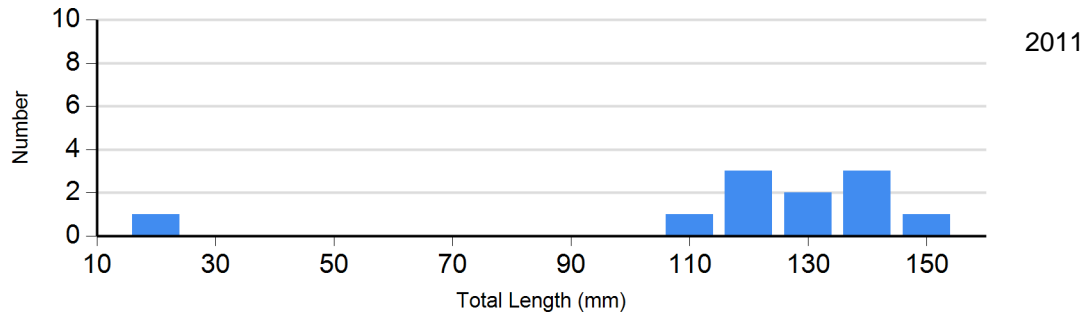
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Species: Creek Chub



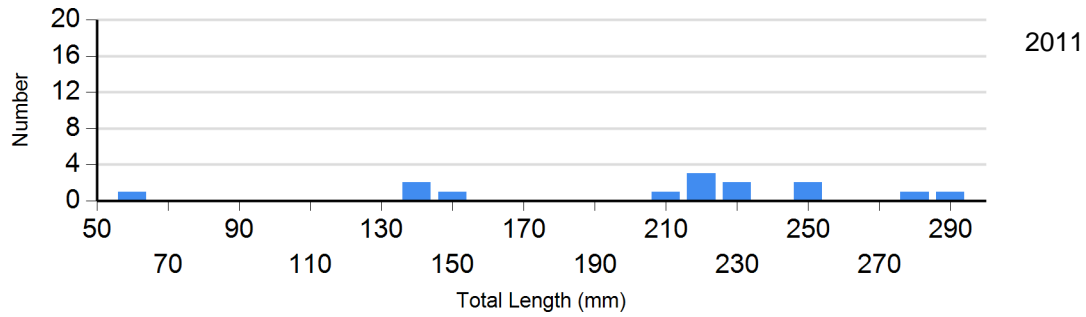
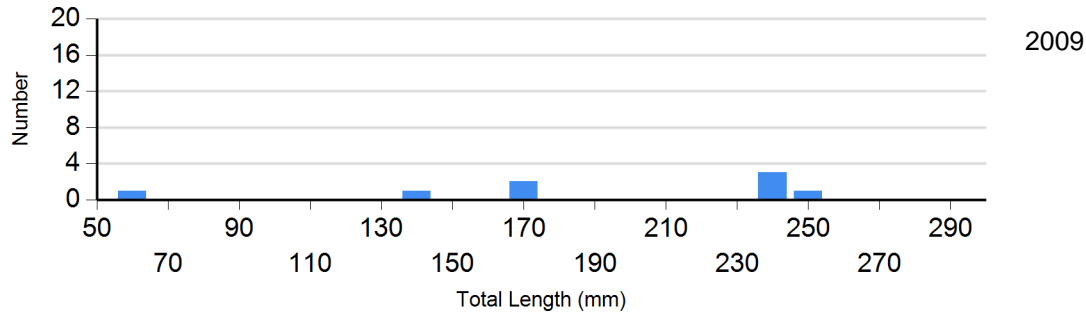
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Species: Rainbow Trout



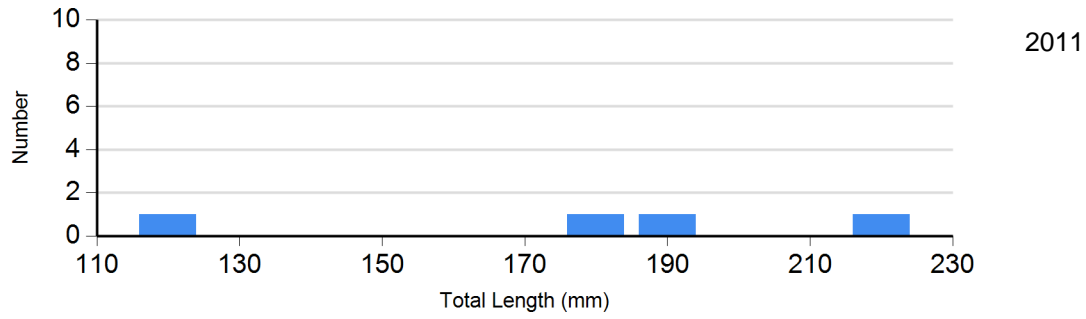
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Species: Rock Bass



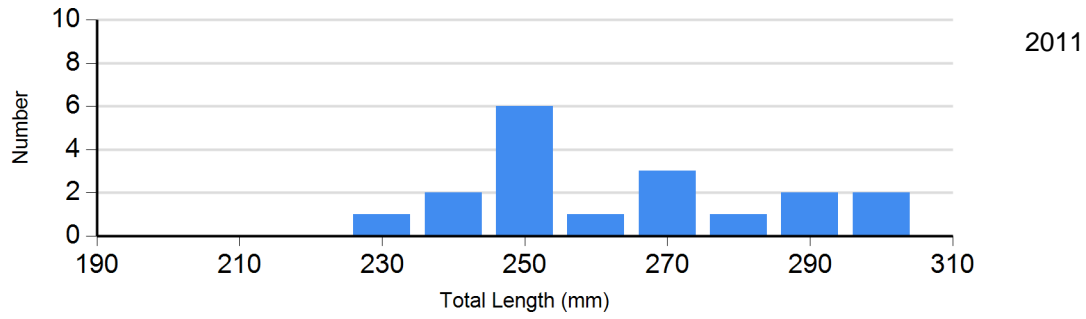
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Species: White Sucker



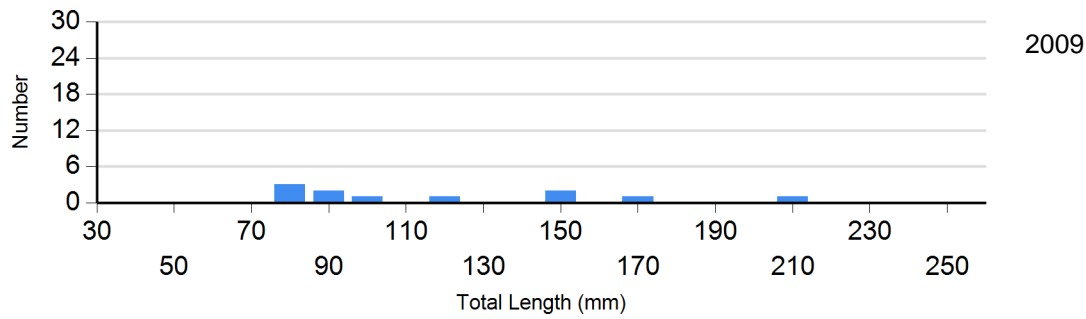
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Species: Black Bullhead

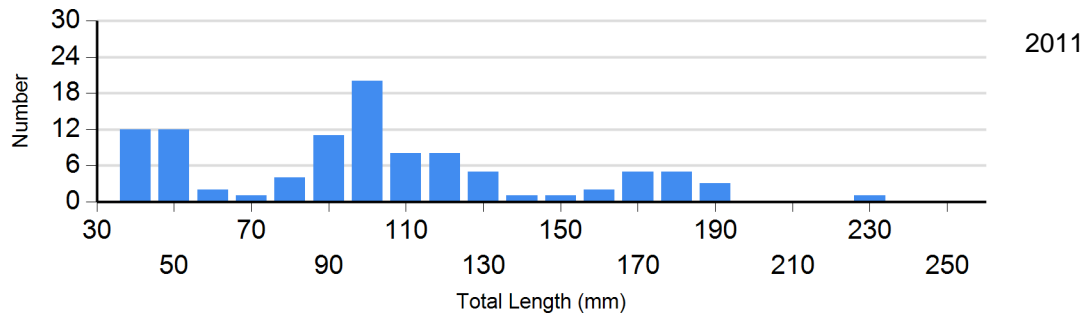


Site: 1885
Species: Brown Trout

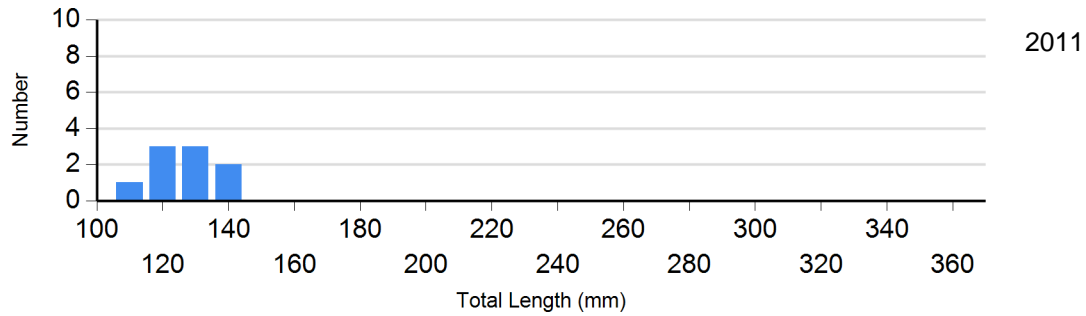


Site: 1885
Species: Creek Chub





Site: 1885
Species: Rainbow Trout



Site: 1885
Species: White Sucker

