

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Grace Coolidge Creek, Custer County
21-0012-00
1997

Table 1. Population and Biomass Estimates for Grace Coolidge Creek

Site Number: 84	Date Sampled: 07/23/1997	Conductivity (umhos/cm): 393
Site Midpoint (Latitude, Longitude): 43.81171838, -103.25873569	Site Length (m): 90	pH: 8.9
Survey Completed by:	Mean Width (m): 6.1	Water Temperature (C): 18.0
Stream Classification: BK2, BR1, RB1	Number of Pass: 3	Voltage: 350

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	3	3	4	3	49	3	33	20	3.00	54	140.3	68.5
Brook Trout	>=200mm	4	4	4	4	65	9	44	26	8.42	72	245.3	144.3
Brook Trout	All	7	7	8	7	114	14	78	46	12.15	125	200.3	119.0
Brown Trout	<200mm	74	201	495	74	3284	52	2233	1330	46.01	3593	94.9	15.7
Brown Trout	>=200mm	38	39	42	38	637	143	433	258	127.38	697	267.7	223.9
Brown Trout	All	112	159	209	112	2598	224	1767	1052	200.24	2843	153.5	86.3
Creek Chub	All	3	5	24	3	82	0	56	33	0.36	89	81.0	5.0
Longnose Dace	All	97	96	112	97	1569	5	1067	635	4.15	1716	69.2	3.0
Mountain Sucker	All	4	4	6	4	65	2	44	26	2.09	72	152.5	35.8
Rainbow Trout	<200mm	11	14	25	11	229	5	156	93	4.85	250	117.2	23.7
Rainbow Trout	>=200mm	7	7	7	7	114	30	78	46	27.09	125	290.3	265.3
Rainbow Trout	All	18	19	23	18	310	37	211	126	32.62	340	184.5	117.7
White Sucker	All	17	17	19	17	278	80	189	113	71.59	304	273.7	288.6

Site Number: 408
Site Midpoint (Latitude, Longitude): 43.80052356, -103.44637540

Survey Completed by:
 Stream Classification: BK3, RB0

Date Sampled: 07/23/1997
 Site Length (m): 101
 Mean Width (m): 3.7
 Number of Pass: 3

Conductivity (umhos/cm): 87
 pH: 8.5
 Water Temperature (C): 14.0
 Voltage: 450

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	245	371	466	276	10082	158	3673	4083	140.81	5910	95.3	15.6
Brook Trout	>=200mm	2	2	2	2	54	5	20	22	4.34	32	204.0	89.5
Brook Trout	All	247	368	458	278	10000	164	3644	4050	146.73	5862	96.1	16.4
Rainbow Trout	<200mm	28	28	30	28	761	16	277	308	14.00	446	125.9	20.6
Rainbow Trout	All	28	28	30	28	761	16	277	308	14.00	446	125.9	20.6
White Sucker	All	1	1	1	1	27	3	10	11	2.84	16	235.0	117.0

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 Grace Coolidge Creek, 1987-1997

Site 84

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jun 15, 1994	3	3-4	
	Jul 23, 1997	3	3-4	
Brook Trout >=200mm	Jun 15, 1994	4	4-4	BK2
	Jul 23, 1997	4	4-4	BK2
Brown Trout <200mm	Jul 23, 1997	201	74-495	
Brown Trout >=200mm	Jul 23, 1997	39	38-42	BR1
Creek Chub	Jun 15, 1994	71	54-97	

Creek Chub	Jul 23, 1997	5	3-24	
Longnose Dace	Jun 15, 1994	409	254-564	
	Jul 23, 1997	96	97-112	
Mountain Sucker	Jun 15, 1994	1	1-1	
	Jul 23, 1997	4	4-6	
Rainbow Trout <200mm	Jun 15, 1994	8	7-14	
	Jul 23, 1997	14	11-25	
Rainbow Trout >=200mm	Jul 23, 1997	7	7-7	RB1
White Sucker	Jun 15, 1994	13	13-14	
	Jul 23, 1997	17	17-19	

Site 408

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jun 15, 1994	148	144-154	
	Jul 23, 1997	371	276-466	
Brook Trout >=200mm	Jun 15, 1994	1	1-1	BK3
	Jul 23, 1997	2	2-2	BK3

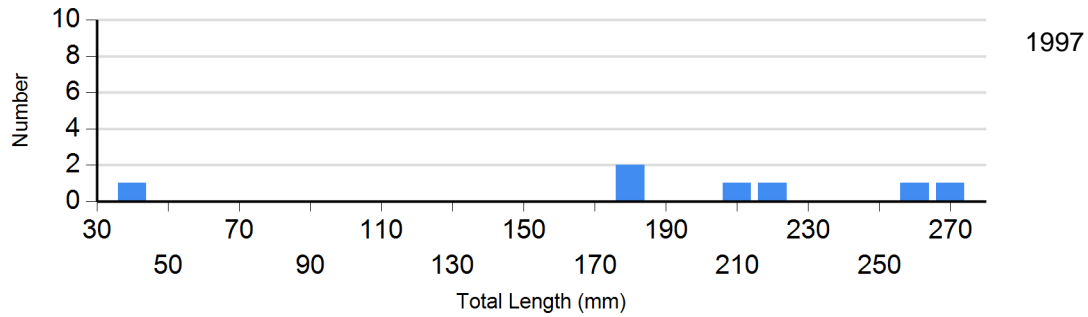
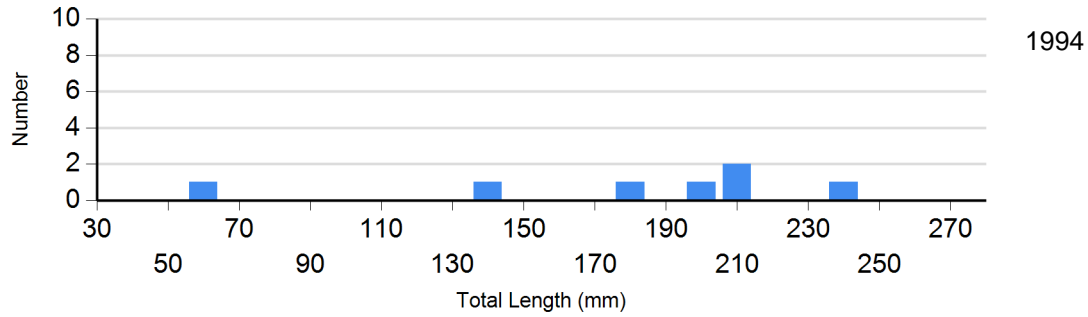
Rainbow Trout <200mm	Jun 15, 1994	6	6-8
	Jul 23, 1997	28	28-30
White Sucker	Jul 23, 1997	1	1-1

Length Frequency Distribution

Length frequency histogram of species sampled by year.

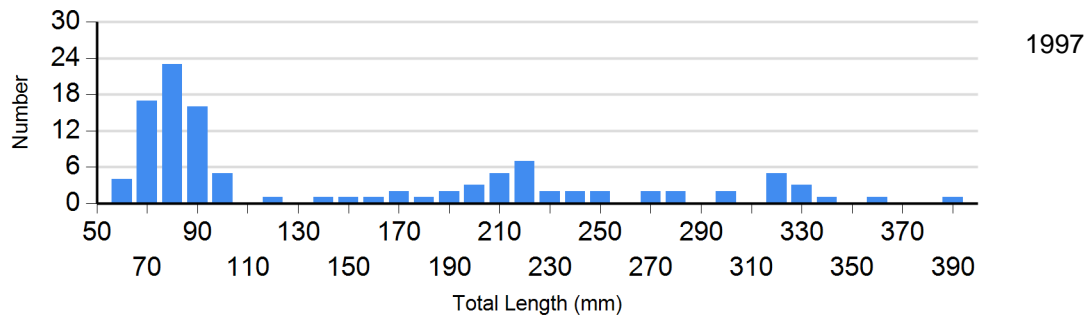
Site: 84

Species: Brook Trout

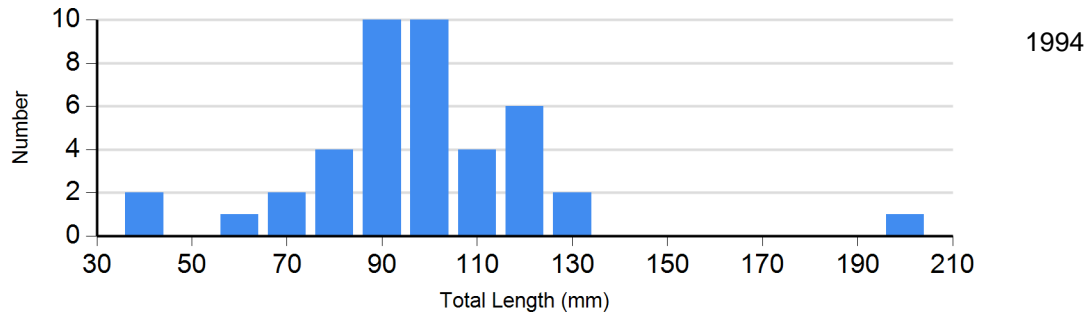


Site: 84

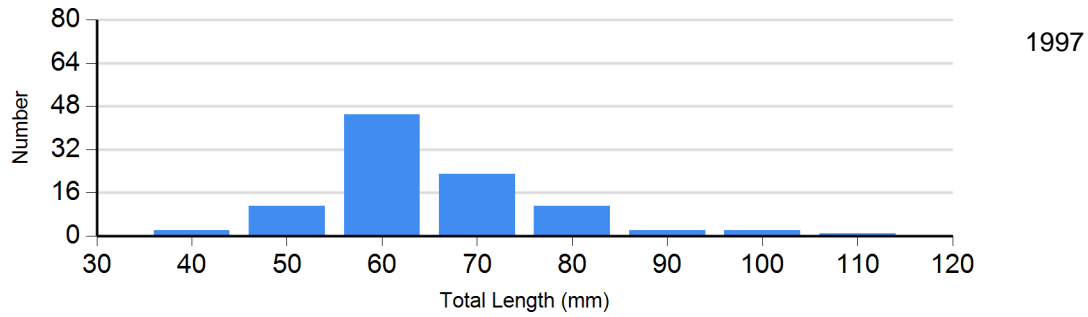
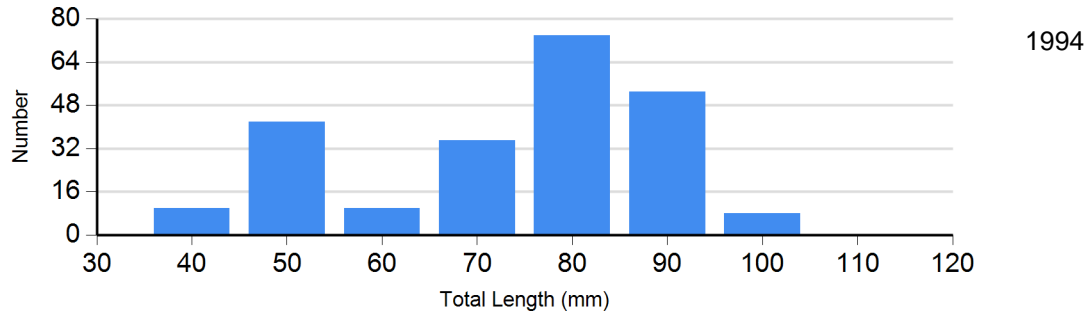
Species: Brown Trout



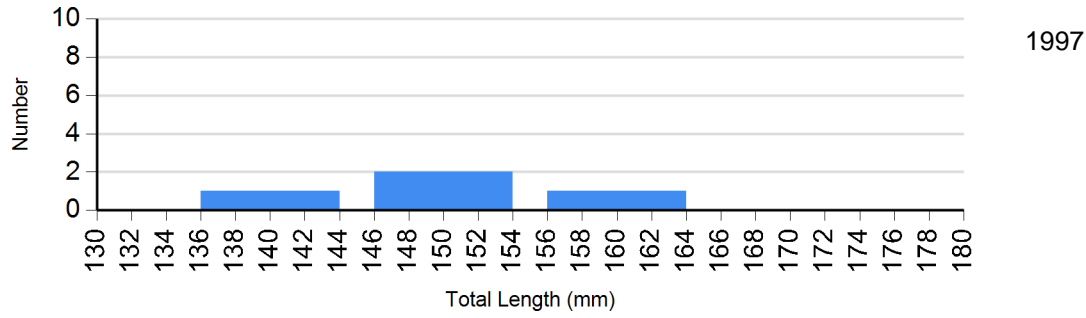
Site: 84
Species: Creek Chub



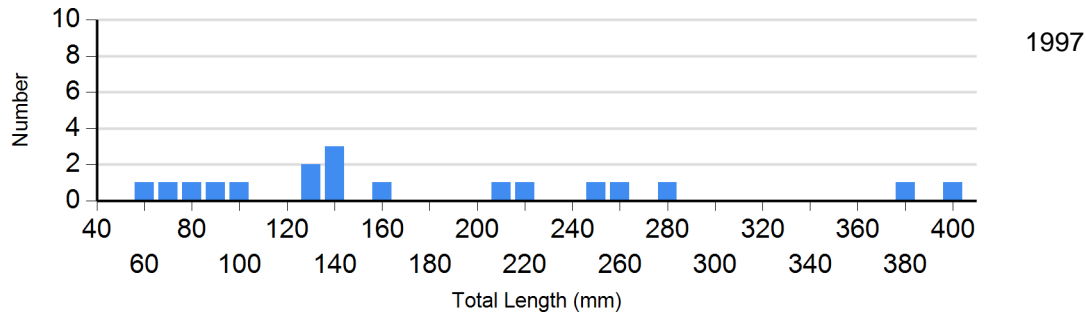
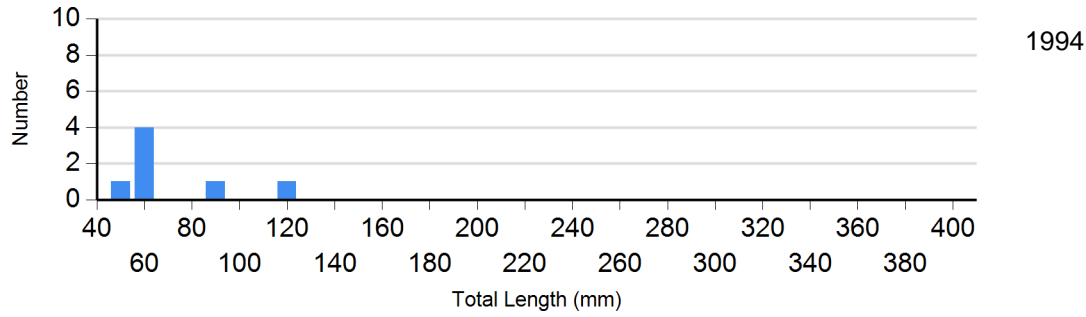
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Species: Longnose Dace



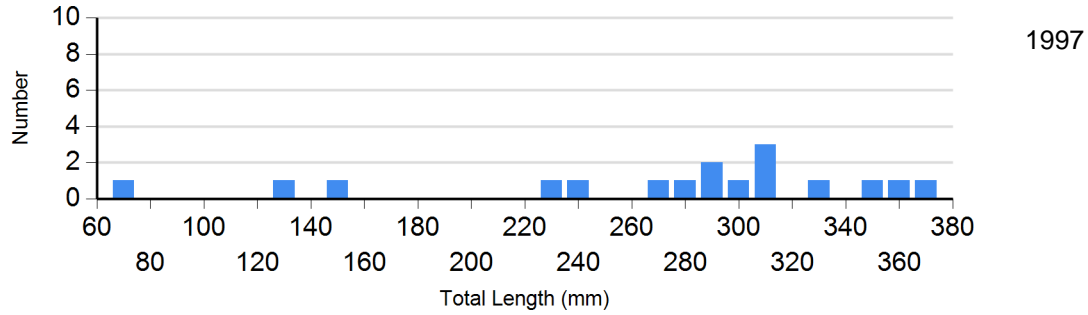
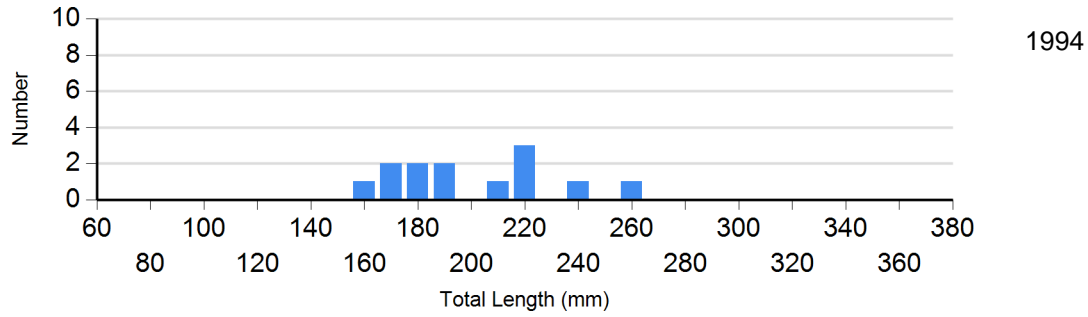
Site: 84
Species: Mountain Sucker



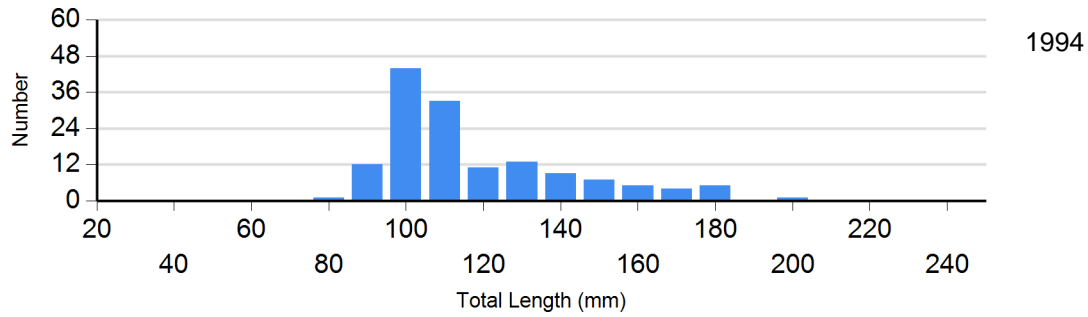
Site: 84
Species: Rainbow Trout

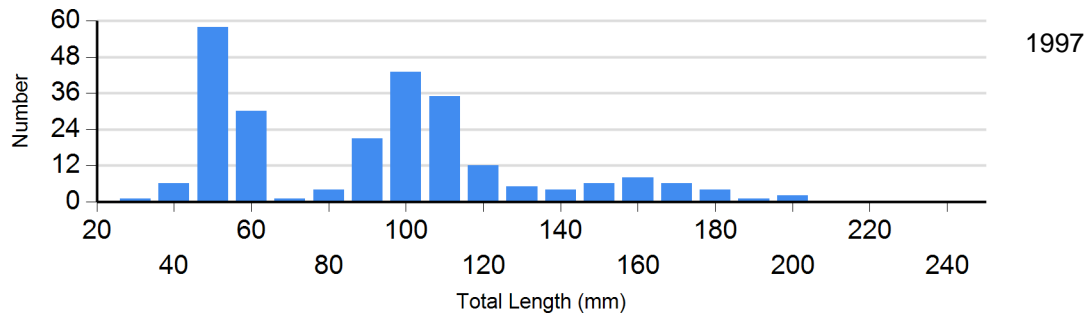


Site: 84
Species: White Sucker

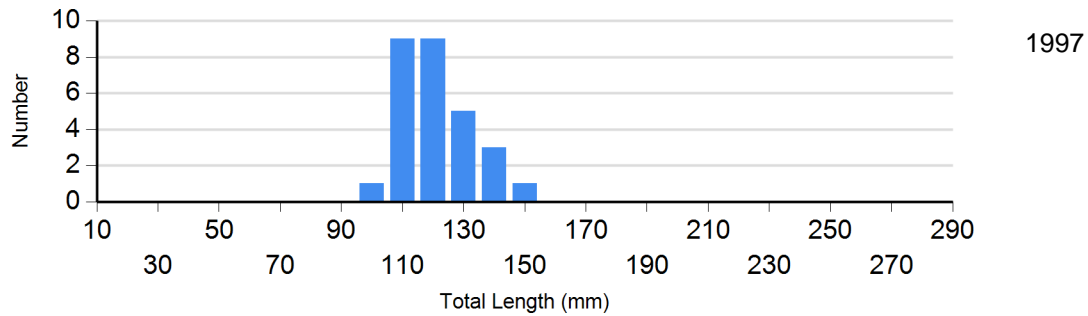
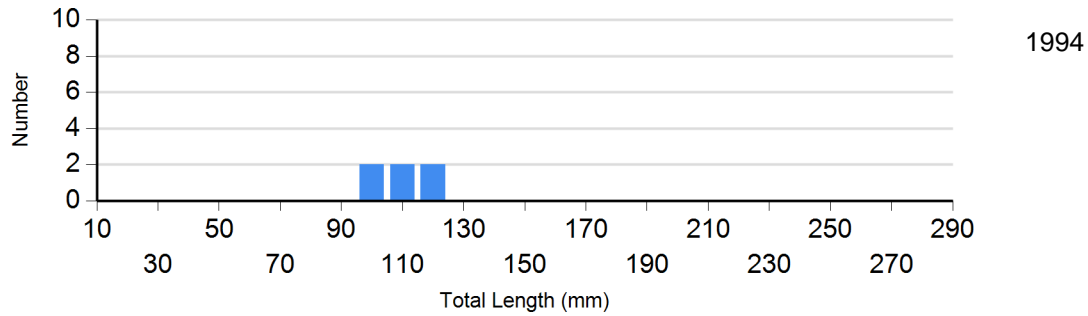


Site: 408
Species: Brook Trout





Site: 408
Species: Rainbow Trout



Site: 408
Species: Unidentified YOY Trout

