

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Grace Coolidge Creek, Custer County
21-0012-00
1994

Table 1. Population and Biomass Estimates for Grace Coolidge Creek

Site Number: 84	Date Sampled: 06/15/1994	Conductivity (umhos/cm):	312
Site Midpoint (Latitude, Longitude): 43.81171838, -103.25873569	Site Length (m): 100	pH:	9.1
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 4.1	Water Temperature (C):	15.0
Stream Classification: BK2, RB0	Number of Pass: 3	Voltage:	250

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	73	3	30	30	2.31	48	131.7	35.3
Brook Trout	>=200mm	4	4	4	4	98	11	40	40	10.04	64	218.3	115.3
Brook Trout	All	7	7	8	7	171	14	70	69	12.35	113	181.1	81.0
Creek Chub	All	54	71	97	54	1732	21	710	701	19.06	1142	102.5	12.3
Longnose Dace	All	232	409	564	254	9976	59	4090	4040	52.79	6581	77.9	5.9
Mountain Sucker	All	1	1	1	1	24	1	10	10	1.33	16	179.0	61.0
Rainbow Trout	<200mm	7	8	14	7	195	1	80	79	1.16	129	75.0	6.7
Rainbow Trout	All	7	8	14	7	195	1	80	79	1.16	129	75.0	6.7
Stone Cat	All	1	1	1	1	24	1	10	10	0.65	16	145.0	30.0
Unidentified YOY Trout	<200mm	3	3	4	3	73	0	30	30	0.20	48	64.7	3.0
Unidentified YOY Trout	All	3	3	4	3	73	0	30	30	0.20	48	64.7	3.0
White Sucker	All	13	13	14	13	317	30	130	128	26.42	209	204.1	93.3

Site Number: 317	Date Sampled: 06/13/1994	Conductivity (umhos/cm):	160
Site Midpoint (Latitude, Longitude): 43.77635824, -103.39855114	Site Length (m): 100	pH:	8.7

Survey Completed by: South Dakota Game, Fish and Parks

Mean Width (m): 3.9

Water Temperature (C): 19.0

Stream Classification: BK2

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	66	67	70	66	1736	54	670	703	48.60	1078	127.5	31.4
Brook Trout	>=200mm	8	8	8	8	207	26	80	84	22.78	129	224.1	123.1
Brook Trout	All	74	75	78	74	1943	82	750	787	72.86	1207	137.9	42.0
Creek Chub	All	48	48	50	48	1244	15	480	504	13.81	772	108.5	12.4
Longnose Dace	All	499	572	607	537	14819	49	5720	6002	44.10	9203	73.2	3.3
Unidentified YOY Trout	<200mm	2	1	2	2	26	0	10	10	0.05	16	54.0	2.0
Unidentified YOY Trout	All	2	1	2	2	26	0	10	10	0.05	16	54.0	2.0
White Sucker	All	42	42	43	42	1088	73	420	441	65.58	676	184.9	67.5

Site Number: 408

Date Sampled: 06/15/1994

Conductivity (umhos/cm): 50

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

Site Length (m): 100

pH: 8.6

Survey Completed by: South Dakota Game, Fish and Parks

Mean Width (m): 3.2

Water Temperature (C): 19.0

Stream Classification: BK3, RB0

Number of Pass: 3

Voltage: 600

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	144	148	154	144	4596	84	1480	1861	75.21	2381	121.9	18.3
Brook Trout	>=200mm	1	1	1	1	31	2	10	13	1.97	16	200.0	71.0
Brook Trout	All	145	149	155	145	4627	86	1490	1874	77.22	2397	122.4	18.7
Rainbow Trout	<200mm	6	6	8	6	186	2	60	75	2.19	97	115.5	13.2
Rainbow Trout	All	6	6	8	6	186	2	60	75	2.19	97	115.5	13.2
Unidentified YOY Trout	<200mm	130	328	650	130	10186	112	3280	4125	100.05	5278	45.4	11.0

Unidentified
YOY Trout

All

130

328

650

130

10186

112

3280

4125

100.05

5278

45.4

11.0



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, 1984-1994

Site 84

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jun 15, 1994	3	3-4	
Brook Trout >=200mm	Jun 15, 1994	4	4-4	BK2
Creek Chub	Jun 15, 1994	71	54-97	
Longnose Dace	Jun 15, 1994	409	254-564	
Mountain Sucker	Jun 15, 1994	1	1-1	
Rainbow Trout <200mm	Jun 15, 1994	8	7-14	
Stone Cat	Jun 15, 1994	1	1-1	

White Sucker

Jun 15, 1994

13

13-14

Site 317

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jun 13, 1994	67	66-70	
Brook Trout >=200mm	Jun 13, 1994	8	8-8	BK2
Creek Chub	Jun 13, 1994	48	48-50	
Longnose Dace	Jun 13, 1994	572	537-607	
White Sucker	Jun 13, 1994	42	42-43	

Site 408

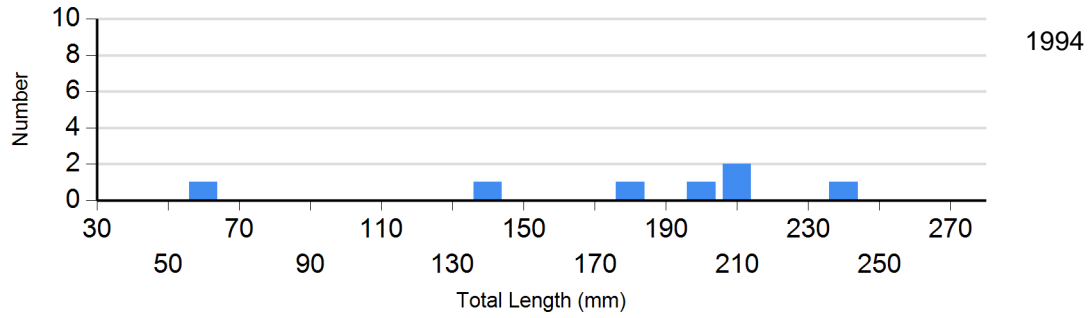
Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jun 15, 1994	148	144-154	
Brook Trout >=200mm	Jun 15, 1994	1	1-1	BK3
Rainbow Trout <200mm	Jun 15, 1994	6	6-8	

Length Frequency Distribution

Length frequency histogram of species sampled by year.

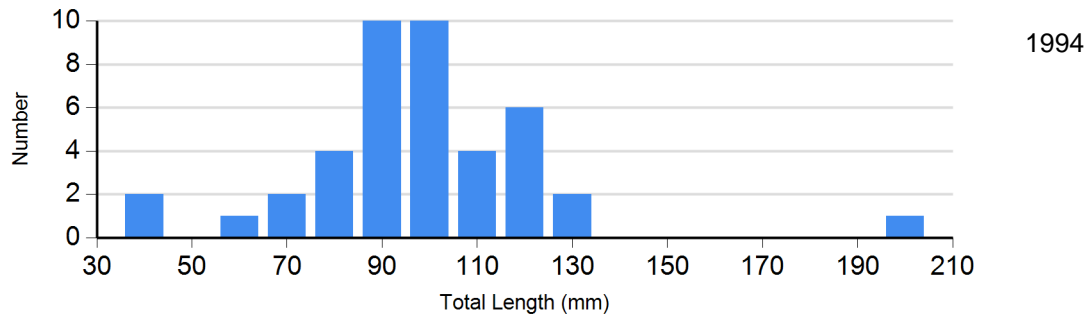
Site: 84

Species: Brook Trout



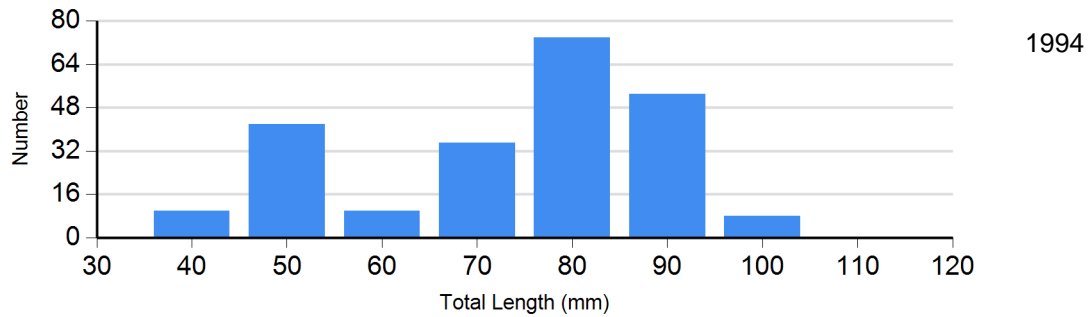
Site: 84

Species: Creek Chub

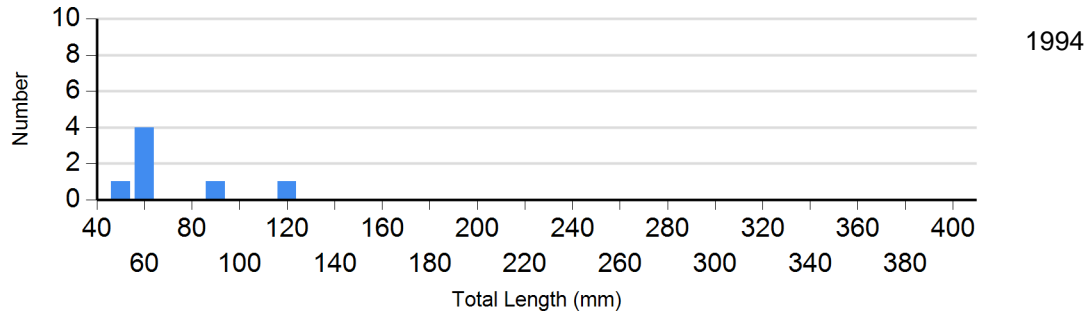


Site: 84

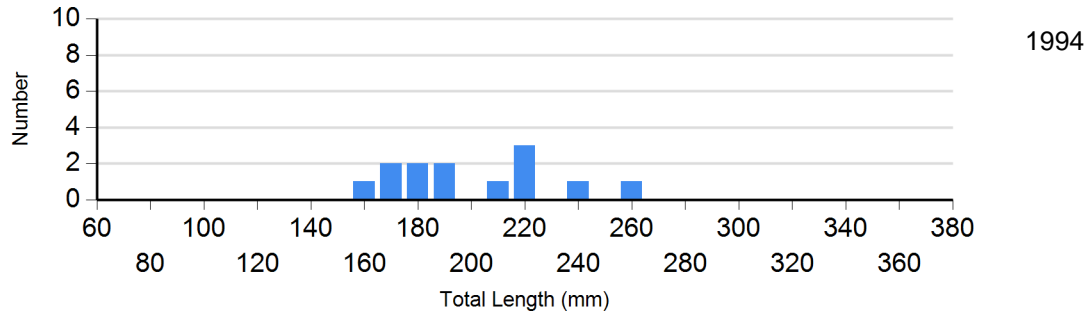
Species: Longnose Dace



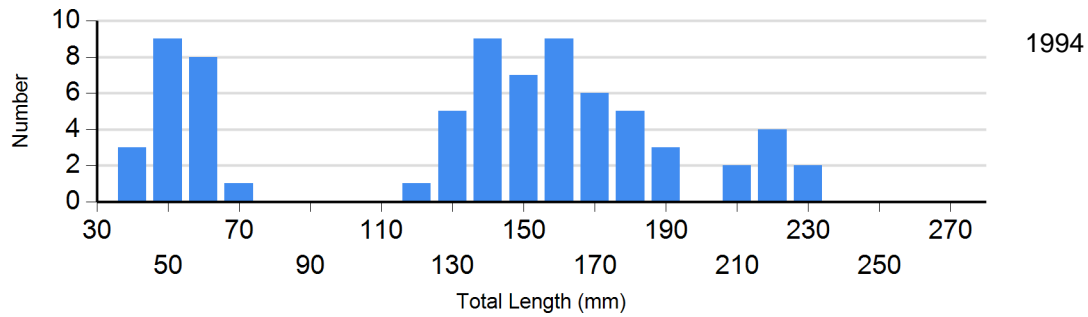
Site: 84
Species: Rainbow Trout



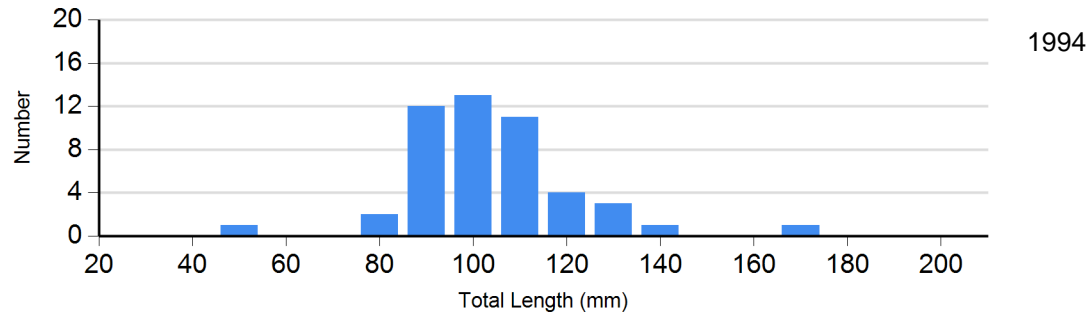
Site: 84
Species: White Sucker



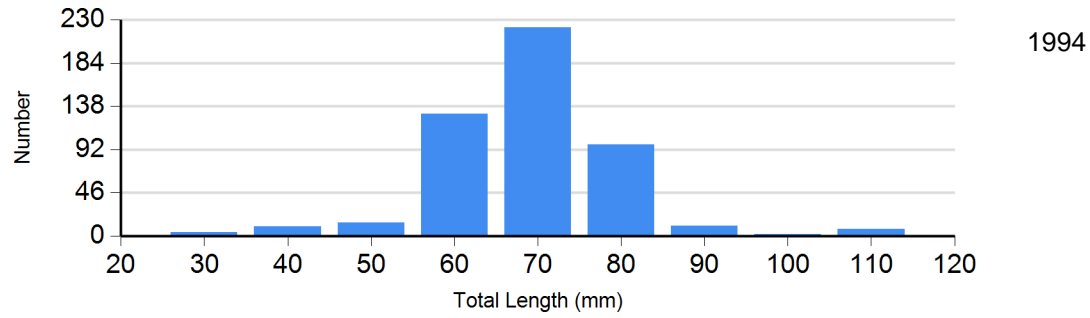
Site: 317
Species: Brook Trout



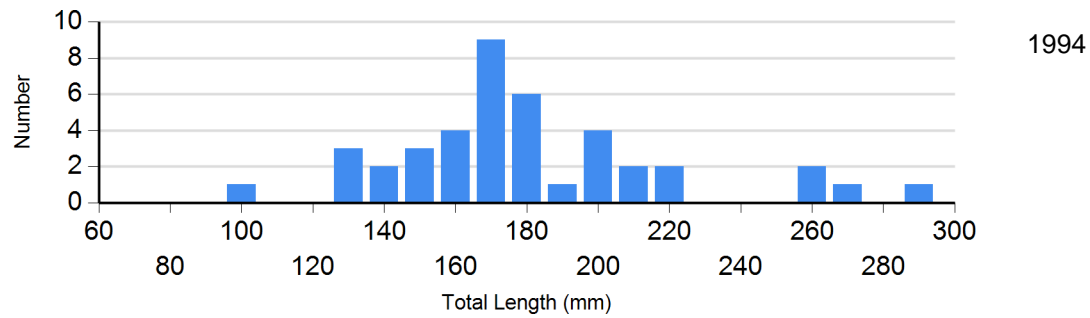
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Species: Creek Chub



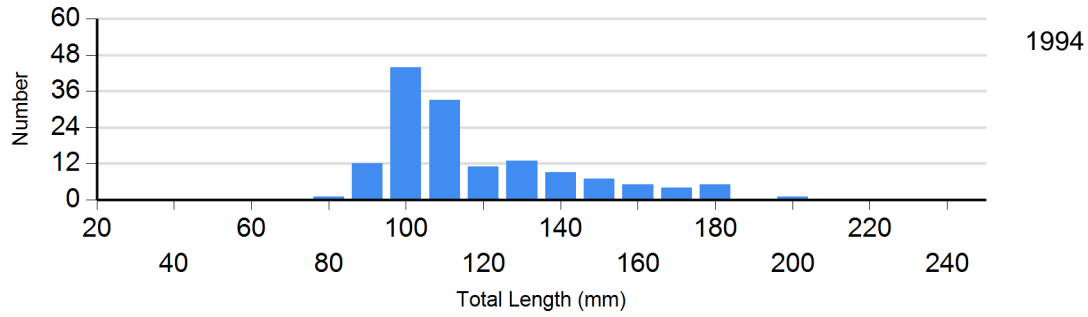
Site: 317
Species: Longnose Dace



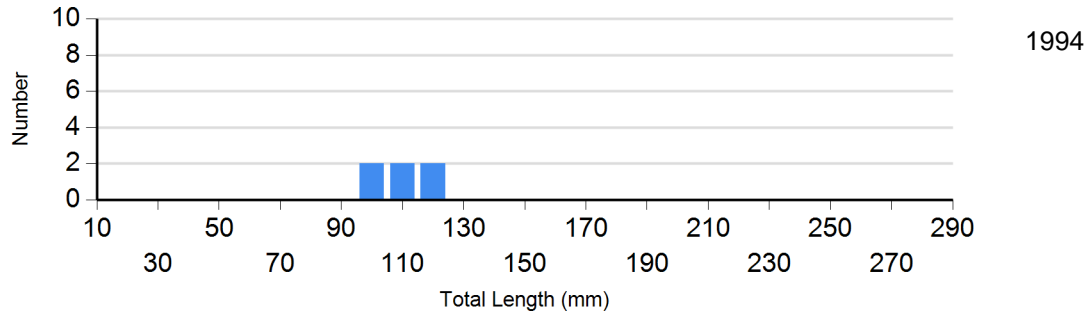
Site: 317
Species: White Sucker



Site: 408
Species: Brook Trout



Site: 408
Species: Rainbow Trout



Site: 408
Species: Unidentified YOY Trout

