

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Little Spearfish Creek, Lawrence County
09-0017-00
1998

Table 1. Population and Biomass Estimates for Little Spearfish Creek

Site Number: 3	Date Sampled: 06/22/1998	Conductivity (umhos/cm): 315
Site Midpoint (Latitude, Longitude): 44.35119883, -103.93106834	Site Length (m): 93	pH: 8.3
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 3.5	Water Temperature (C): 10.0
Stream Classification: BK3, BR1	Number of Pass: 3	Voltage: 200

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	4	4	6	4	114	1	43	46	1.01	69	95.3	10.0
Brook Trout	>=200mm	2	2	3	2	57	6	22	23	5.25	35	222.5	103.5
Brook Trout	All	6	6	8	6	170	7	65	69	6.27	104	137.7	41.2
Brown Trout	<200mm	219	254	280	228	7216	176	2731	2922	157.32	4394	124.9	24.4
Brown Trout	>=200mm	46	48	53	46	1364	167	516	552	148.73	830	226.2	122.2
Brown Trout	All	265	302	327	277	8580	353	3247	3475	315.16	5225	142.5	41.1

Site Number: 52	Date Sampled: 06/22/1998	Conductivity (umhos/cm): 285
Site Midpoint (Latitude, Longitude): 44.33809498, -103.95962125	Site Length (m): 100	pH: 8.4
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 2.4	Water Temperature (C): 11.0
Stream Classification: BK2, BR2	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	80	91	105	80	3760	82	910	1523	73.61	1464	121.0	21.9
Brook Trout	>=200mm	2	2	2	2	83	9	20	33	7.93	32	215.5	107.5
Brook Trout	All	82	92	105	82	3802	91	920	1540	81.51	1480	123.3	24.0

Brown Trout	<200mm	25	28	36	25	1157	58	280	469	51.94	451	167.5	50.3
Brown Trout	>=200mm	6	6	8	6	248	45	60	100	40.22	97	254.3	181.7
Brown Trout	All	31	36	46	31	1488	113	360	602	100.56	579	184.3	75.7

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 Little Spearfish Creek, 1988-1998

Site 3

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jun 22, 1998	4	4-6	
Brook Trout >=200mm	Jun 22, 1998	2	2-3	BK3
Brown Trout <200mm	Oct 28, 1992	14	14-14	
	Jun 22, 1998	254	228-280	
Brown Trout >=200mm	Oct 28, 1992	7	7-7	BR3
	Jun 22, 1998	48	46-53	BR1

Site 52

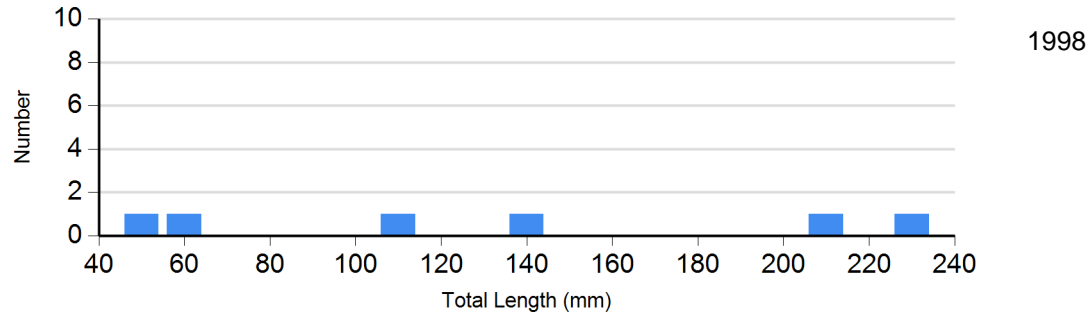
Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Oct 28, 1992	40	40-40	
	Jun 22, 1998	91	80-105	
Brook Trout >=200mm	Oct 28, 1992	1	1-1	BK3
	Jun 22, 1998	2	2-2	BK2
Brown Trout <200mm	Jun 22, 1998	28	25-36	
Brown Trout >=200mm	Jun 22, 1998	6	6-8	BR2

Length Frequency Distribution

Length frequency histogram of species sampled by year.

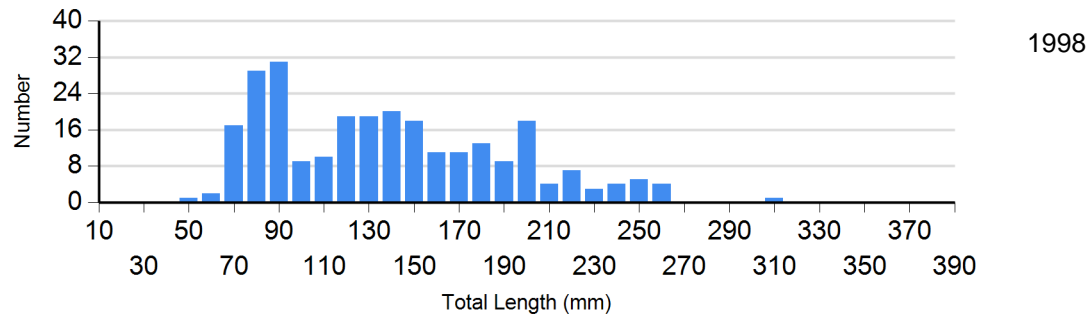
Site: 3

Species: Brook Trout



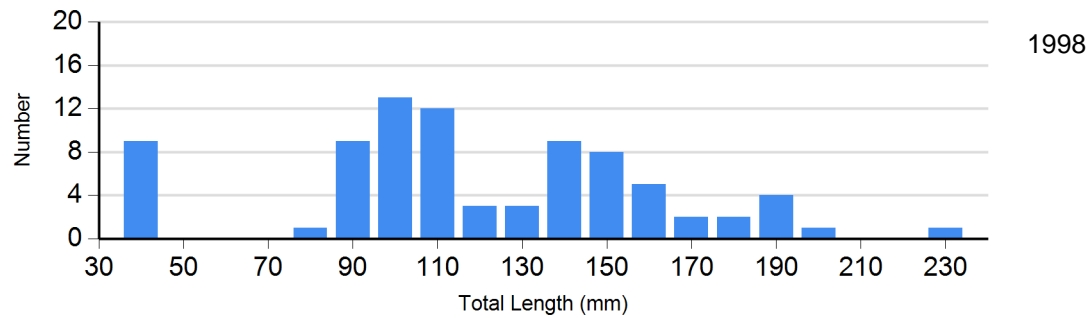
Site: 3

Species: Brown Trout



Site: 52

Species: Brook Trout



Site: 52
Species: Brown Trout

