

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
East Spearfish Creek (Hanna), Lawrence County
09-0016-00
2006

Table 1. Population and Biomass Estimates for East Spearfish Creek (Hanna)

Site Number: 37
Site Midpoint (Latitude, Longitude): 44.27474914, -103.85439849
Survey Completed by: South Dakota Game, Fish and Parks
Stream Classification: BK0, BR2

Date Sampled: 08/30/2006
Site Length (m): 100
Mean Width (m): 4.5
Number of Pass: 3
Conductivity (umhos/cm): 280
pH:
Water Temperature (C): 11.0
Voltage:

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	1	1	1	1	22	1	10	9	0.76	16	152.0	38.0
Brook Trout	All	1	1	1	1	22	1	10	9	0.76	16	152.0	38.0
Brown Trout	<200mm	105	105	105	105	2338	58	1050	947	51.51	1689	121.4	24.7
Brown Trout	>=200mm	7	7	7	7	156	75	70	63	67.30	113	288.6	483.6
Brown Trout	All	558	599	620	578	13338	715	5990	5402	638.48	9638	131.8	53.6

Site Number: 54
Site Midpoint (Latitude, Longitude): 44.26528884, -103.84758730
Survey Completed by: South Dakota Game, Fish and Parks
Stream Classification: BK0, BR2

Date Sampled: 08/30/2006
Site Length (m): 100
Mean Width (m): 3.3
Number of Pass: 3
Conductivity (umhos/cm): 315
pH:
Water Temperature (C): 10.0
Voltage:

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	1	1	1	1	30	1	10	12	0.56	16	130.0	21.0
Brook Trout	All	1	1	1	1	30	1	10	12	0.56	16	130.0	21.0
Brown Trout	<200mm	100	100	100	100	2997	63	1000	1214	56.42	1609	108.3	21.1
Brown Trout	>=200mm	10	10	10	10	300	39	100	121	35.11	161	228.9	131.2
Brown Trout	All	163	173	183	163	5185	162	1730	2100	144.81	2784	119.2	31.3

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 East Spearfish Creek (Hanna), 1996-2006

Site 37

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jun 01, 1998	5	5-6	
	Aug 30, 2006	1	1-1	
Brown Trout <200mm	Jun 01, 1998	318	290-346	
	Aug 30, 2006	105	105-105	
Brown Trout >=200mm	Jun 01, 1998	87	82-95	BR1
	Aug 30, 2006	7	7-7	BR2

Site 54

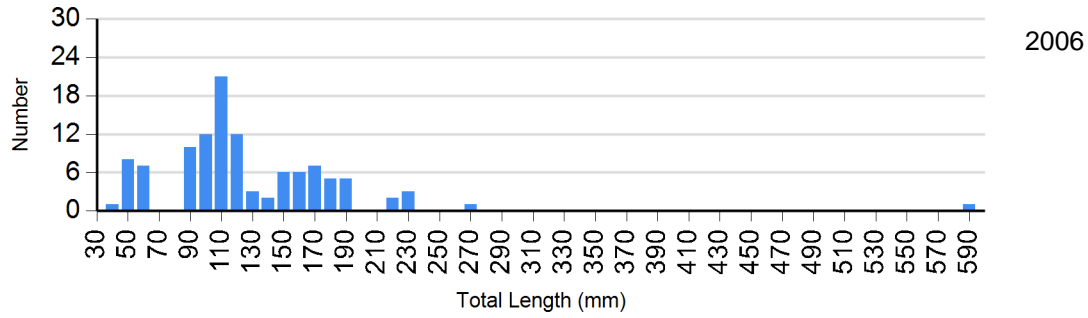
Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Aug 30, 2006	1	1-1	
Brown Trout <200mm	Jun 12, 1998	115	110-122	
	Aug 30, 2006	100	100-100	
Brown Trout >=200mm	Jun 12, 1998	30	30-31	BR1
	Aug 30, 2006	10	10-10	BR2

Length Frequency Distribution

Length frequency histogram of species sampled by year.

Site: 37

Species: Brown Trout



Site: 54

Species: Brown Trout

