

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Deadwood Creek, Lawrence County
09-0060-00
2004

Table 1. Population and Biomass Estimates for Deadwood Creek

Site Number: 8	Date Sampled: 08/25/2004	Conductivity (umhos/cm):
Site Midpoint (Latitude, Longitude): 44.37166357, -103.73844669	Site Length (m): 100	pH:
Survey Completed by: Chadwick Ecological Services	Mean Width (m): 2.0	Water Temperature (C): 14.0
Stream Classification: BK2	Number of Pass: 3	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	59	60	63	59	3000	34	600	1215	30.59	965	94.4	11.4
Brook Trout	>=200mm	2	2	2	2	100	11	20	41	10.00	32	222.5	112.0
Brook Trout	All	61	62	65	61	3100	46	620	1256	40.73	998	98.6	14.7

Site Number: 9	Date Sampled: 08/25/2004	Conductivity (umhos/cm):
Site Midpoint (Latitude, Longitude): 44.37126918, -103.73941917	Site Length (m): 94	pH:
Survey Completed by: Chadwick Ecological Services	Mean Width (m): 2.7	Water Temperature (C):
Stream Classification: BK3, BR0	Number of Pass: 3	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	43	43	44	43	1593	25	457	645	22.60	736	111.7	15.9
Brook Trout	>=200mm	1	1	1	1	37	3	11	15	2.98	17	205.0	90.0
Brook Trout	All	44	44	45	44	1630	29	468	660	25.57	753	113.8	17.6
Brown Trout	<200mm	1	1	1	1	37	0	11	15	0.20	17	84.0	6.0
Brown Trout	All	1	1	1	1	37	0	11	15	0.20	17	84.0	6.0

Site Number: 15
Site Midpoint (Latitude, Longitude): 44.37074701, -103.74538988
Survey Completed by: Chadwick Ecological Services
Stream Classification: BK2, BR2

Date Sampled: 08/26/2004
Site Length (m): 104
Mean Width (m): 3.1
Number of Pass: 3
Conductivity (umhos/cm):
pH:
Water Temperature (C):
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	48	48	49	48	1548	19	462	627	16.60	743	93.6	12.0
Brook Trout	>=200mm	7	7	7	7	226	29	67	91	26.18	108	229.9	129.9
Brook Trout	All	55	55	56	55	1774	48	529	719	42.78	851	111.0	27.0
Brown Trout	<200mm	2	2	2	2	65	4	19	26	3.46	31	184.0	60.0
Brown Trout	>=200mm	6	6	6	6	194	38	58	78	33.81	93	255.2	195.7
Brown Trout	All	8	8	8	8	258	42	77	105	37.27	124	237.4	161.8
Longnose Dace	All	1	1	2	1	32	0	10	13	0.08	15	69.0	2.8

Site Number: 49
Site Midpoint (Latitude, Longitude): 44.36269958, -103.78234679
Survey Completed by: Chadwick Ecological Services
Stream Classification: BK2

Date Sampled: 08/25/2004
Site Length (m): 100
Mean Width (m): 1.5
Number of Pass: 3
Conductivity (umhos/cm):
pH:
Water Temperature (C):
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	86	89	94	86	5933	81	890	2403	71.99	1432	100.4	13.6
Brook Trout	>=200mm	4	4	4	4	267	23	40	108	20.66	64	204.3	86.8
Brook Trout	All	90	92	96	90	6133	103	920	2484	92.22	1480	105.0	16.8

Site Number: 72
Site Midpoint (Latitude, Longitude): 44.35884420, -103.80543515

Date Sampled: 09/03/2004
Site Length (m): 100
Conductivity (umhos/cm):
pH:

Survey Completed by: Chadwick Ecological Services

Mean Width (m): 1.1

Water Temperature (C):

Stream Classification: BK0

Number of Pass: 3

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	30	30	32	30	2703	22	300	1095	19.76	483	93.2	8.2
Brook Trout	All	30	30	32	30	2703	22	300	1095	19.76	483	93.2	8.2

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 Deadwood Creek, 1994-2004

Site 8

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Aug 25, 2004	60	59-63	
Brook Trout >=200mm	Aug 25, 2004	2	2-2	BK2

Site 9

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Aug 25, 2004	43	43-44	
Brook Trout >=200mm	Aug 25, 2004	1	1-1	BK3
Brown Trout <200mm	Aug 25, 2004	1	1-1	

Site 15

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Sep 12, 1998	33	33-35	
	Aug 26, 2004	48	48-49	
Brook Trout >=200mm	Sep 12, 1998	5	5-5	BK2
	Aug 26, 2004	7	7-7	BK2
Brown Trout <200mm	Aug 26, 2004	2	2-2	
Brown Trout >=200mm	Aug 26, 2004	6	6-6	BR2
Longnose Dace	Aug 26, 2004	1	1-2	

Site 49

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Oct 13, 1994	90	75-108	
	Sep 25, 1996	156	149-164	
	Sep 11, 1997	200	197-205	
	Sep 11, 1998	334	331-338	
	Oct 17, 2001	216	211-222	
	Aug 25, 2004	89	86-94	

Brook Trout >=200mm	Oct 13, 1994	8	8-9	BK3
	Sep 25, 1996	28	28-29	BK3
	Sep 11, 1997	16	16-16	BK1
	Sep 11, 1998	3	3-4	BK2
	Aug 25, 2004	4	4-4	BK2
Longnose Dace	Sep 25, 1996	2	2-4	
	Sep 11, 1997	2	2-4	
	Sep 11, 1998	2	2-2	

Site 72

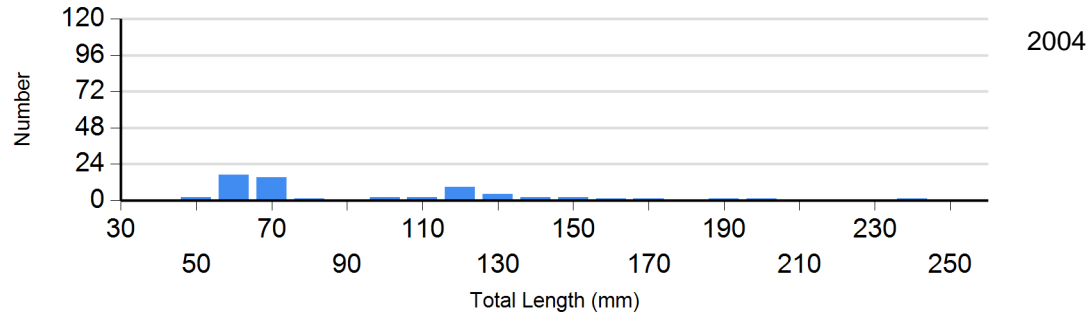
Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Aug 31, 2001	82	82-83	
	Aug 28, 2003	31	31-32	
	Sep 03, 2004	30	30-32	

Length Frequency Distribution

Length frequency histogram of species sampled by year.

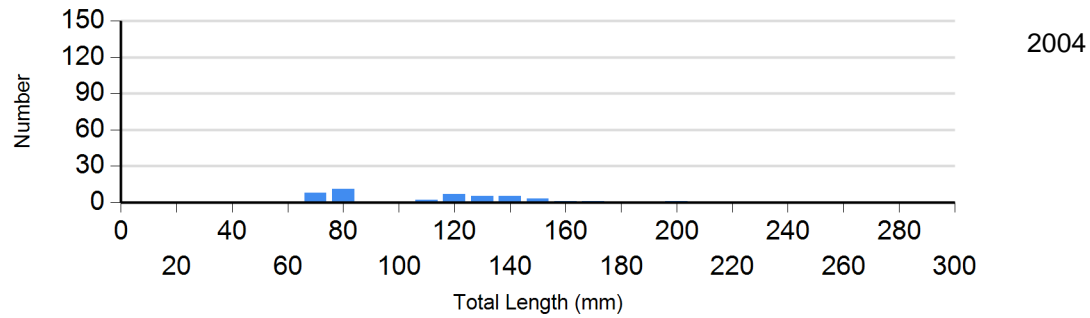
Site: 8

Species: Brook Trout



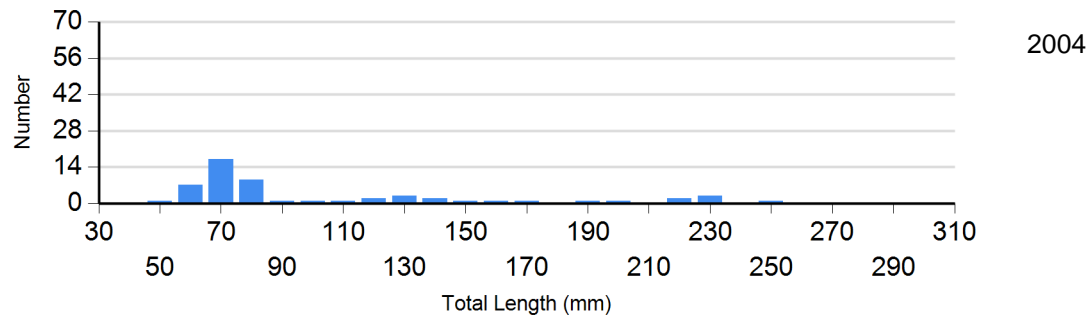
Site: 9

Species: Brook Trout

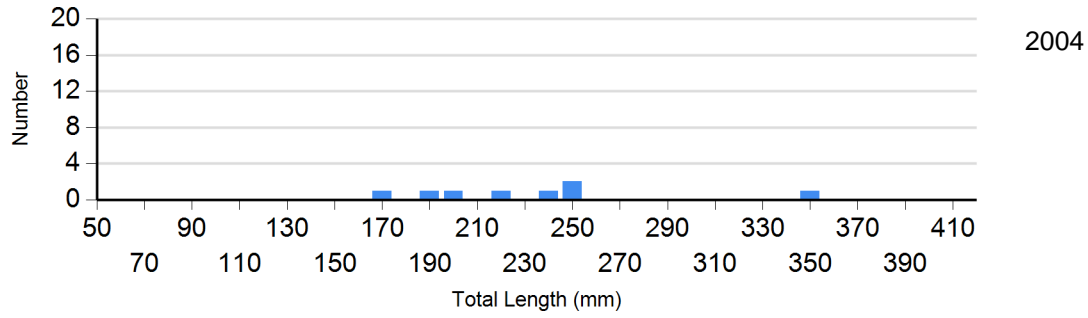


Site: 15

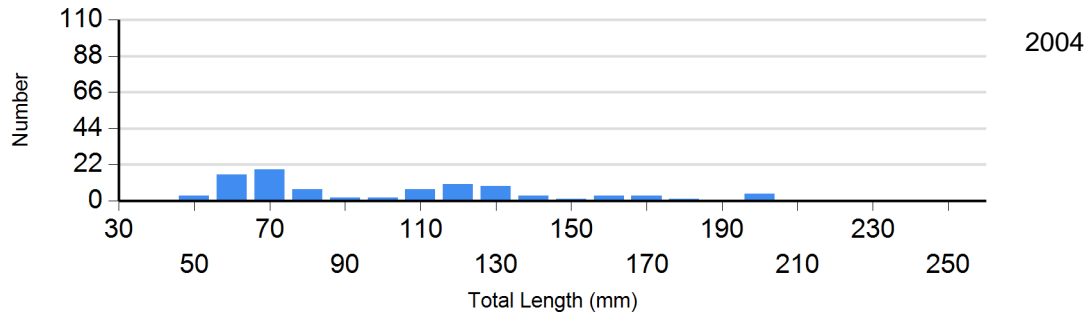
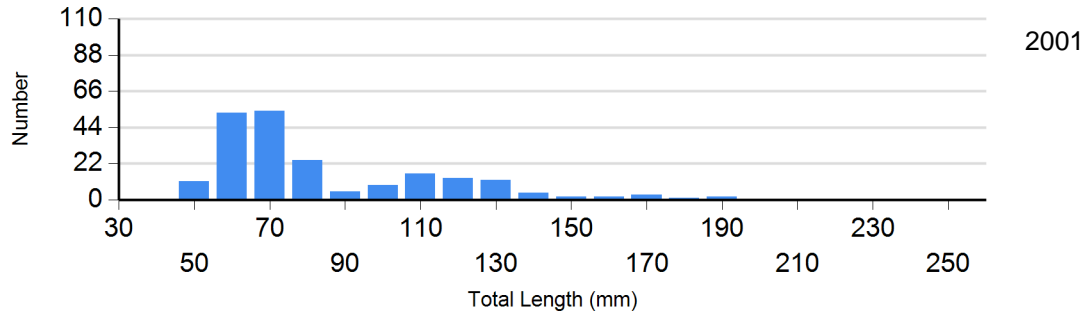
Species: Brook Trout



Site: 15
Species: Brown Trout



Site: 49
Species: Brook Trout



Site: 72
Species: Brook Trout

