

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Rapid Creek - South Fork, Lawrence County
09-0020-00
2003

Table 1. Population and Biomass Estimates for Rapid Creek - South Fork

Site Number: 7	Date Sampled: 05/07/2003	Conductivity (umhos/cm): 280
Site Midpoint (Latitude, Longitude): 44.12873665, -103.74054709	Site Length (m): 100	pH:
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 3.5	Water Temperature (C): 8.0
Stream Classification: BR1	Number of Pass: 3	Voltage: 300

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)
Brown Trout	<200mm	28	31	38	28	895	18	310	362	16.13	499	107.1	20.2
Brown Trout	>=200mm	17	17	18	17	491	60	170	199	53.98	274	237.6	123.2
Brown Trout	All	45	47	51	45	1357	80	470	550	71.59	756	156.4	59.1
Hatchery Brown Trout	>=200mm	6	6	6	6	173	34	60	70	30.01	97	289.0	194.0
Hatchery Brown Trout	All	6	6	6	6	173	34	60	70	30.01	97	289.0	194.0
White Sucker	All	4	4	4	4	115	19	40	47	16.88	64	234.3	163.8

Site Number: 7	Date Sampled: 09/23/2003	Conductivity (umhos/cm): 305
Site Midpoint (Latitude, Longitude): 44.12873665, -103.74054709	Site Length (m): 100	pH: 9.0
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 3.0	Water Temperature (C): 9.5
Stream Classification: BR1	Number of Pass: 3	Voltage: 300

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)
Brown Trout	<200mm	60	62	67	60	2092	28	620	847	25.28	998	97.1	13.5
Brown Trout	>=200mm	21	21	21	21	709	88	210	287	78.69	338	234.4	124.4

Brown Trout	All	81	82	85	81	2767	117	820	1121	104.43	1319	132.7	42.3
Hatchery Brown Trout	>=200mm	23	23	23	23	776	182	230	314	162.36	370	291.8	234.3
Hatchery Brown Trout	All	23	23	23	23	776	182	230	314	162.36	370	291.8	234.3
White Sucker	All	20	20	21	20	675	74	200	273	65.74	322	185.7	109.1

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 Rapid Creek - South Fork, 1993-2003

Site 7

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brown Trout <200mm	Jul 28, 1994	122	83-172	
	May 07, 2003	31	28-38	
	Sep 23, 2003	62	60-67	
Brown Trout >=200mm	Jul 28, 1994	6	6-6	BR2
	May 07, 2003	17	17-18	BR1
	Sep 23, 2003	21	21-21	BR1
Hatchery Brown Trout >=200mm	Jul 28, 1994	3	3-3	

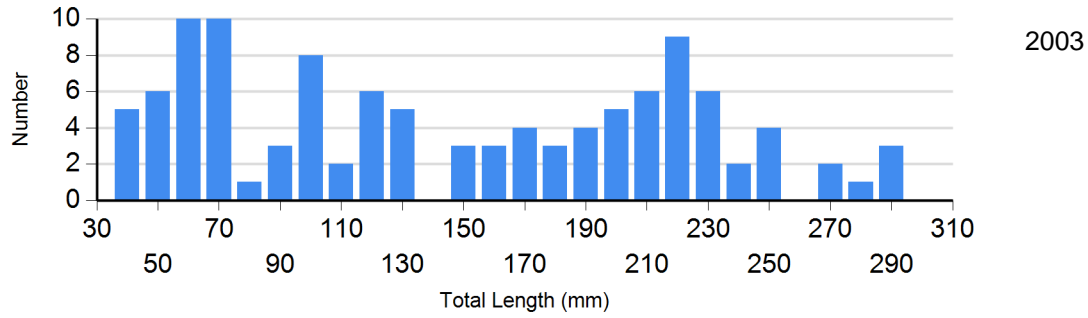
Hatchery Brown Trout >=200mm	May 07, 2003	6	6-6
	Sep 23, 2003	23	23-23
White Sucker	Jul 28, 1994	6	6-8
	May 07, 2003	4	4-4
	Sep 23, 2003	20	20-21

Length Frequency Distribution

Length frequency histogram of species sampled by year.

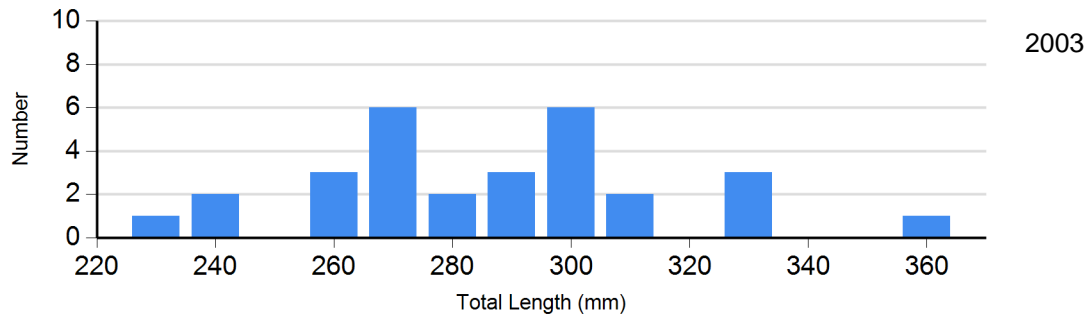
Site: 7

Species: Brown Trout



Site: 7

Species: Hatchery Brown Trout



Site: 7

Species: White Sucker

