

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Rapid Creek - Rhodes Fork, Pennington County
02-9212-00
2003

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

Site Number: 7

Site Midpoint (Latitude, Longitude): 44.14214752, -103.84916391

Survey Completed by: South Dakota Game, Fish and Parks

Stream Classification: BR1

Date Sampled: 05/07/2003

Site Length (m): 102

Mean Width (m): 2.9

Number of Pass: 3

Conductivity (umhos/cm): 290

pH: 6.9

Water Temperature (C): 5.5

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	127	130	135	127	4441	125	1275	1799	111.82	2051	144.3	28.2
Brown Trout	>=200mm	18	18	18	18	615	58	176	249	51.79	284	230.0	94.3
Brown Trout	All	145	148	153	145	5056	169	1451	2048	150.87	2335	155.0	33.4
Hatchery Brown Trout	>=200mm	15	15	15	15	512	78	147	208	70.00	237	257.5	153.0
Hatchery Brown Trout	All	15	15	15	15	512	78	147	208	70.00	237	257.5	153.0

Site Number: 7

Site Midpoint (Latitude, Longitude): 44.14214752, -103.84916391

Survey Completed by: South Dakota Game, Fish and Parks

Stream Classification: BR2

Date Sampled: 09/23/2003

Site Length (m): 100

Mean Width (m): 2.8

Number of Pass: 3

Conductivity (umhos/cm): 290

pH: 9.1

Water Temperature (C): 7.5

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	29	35	48	29	1271	29	350	515	26.17	563	121.2	23.1
Brown Trout	>=200mm	7	7	7	7	254	28	70	103	25.15	113	232.0	110.9
Brown Trout	All	36	40	48	36	1452	58	400	588	52.04	644	142.8	40.1
Hatchery Brown Trout	>=200mm	11	11	12	11	399	72	110	162	64.54	177	270.1	181.0
Hatchery Brown Trout	All	11	11	12	11	399	72	110	162	64.54	177	270.1	181.0

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 Rapid Creek - Rhodes Fork, 1993-2003

Site 7

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brown Trout <200mm	Jul 11, 1994	133	127-140	
	May 07, 2003	130	127-135	
	Sep 23, 2003	35	29-48	
Brown Trout >=200mm	Jul 11, 1994	16	16-17	BR1
	May 07, 2003	18	18-18	BR1
	Sep 23, 2003	7	7-7	BR2
Hatchery Brown Trout >=200mm	Jul 11, 1994	1	1-1	

Hatchery Brown Trout
≥200mm

May 07, 2003

15

15-15

Sep 23, 2003

11

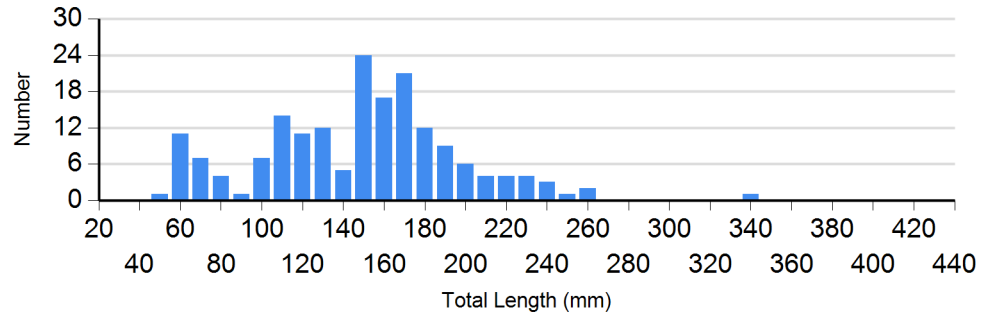
11-12

Length Frequency Distribution

Length frequency histogram of species sampled by year.

Site: 7

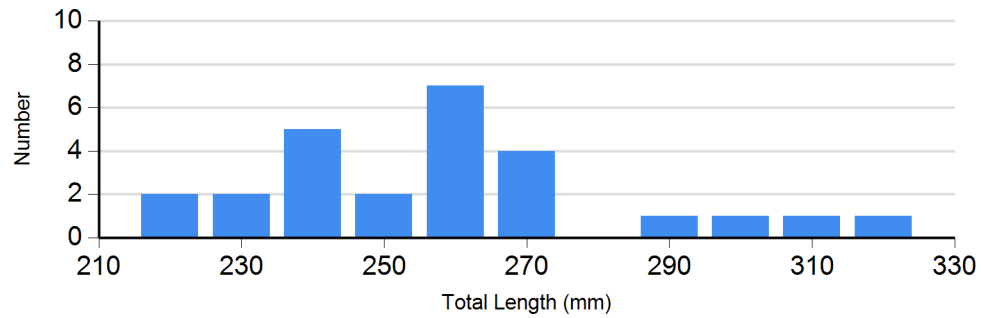
Species: Brown Trout



2003

Site: 7

Species: Hatchery Brown Trout



2003