

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Slate Creek, Pennington County
02-0074-00
1995

Table 1. Population and Biomass Estimates for Slate Creek

Site Number: 108	Date Sampled: 08/07/1995	Conductivity (umhos/cm): 171
Site Midpoint (Latitude, Longitude): 44.03957951, -103.62753690	Site Length (m): 100	pH: 7.4
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 5.4	Water Temperature (C): 15.0
Stream Classification: BK3, BR2	Number of Pass: 3	Voltage: 400

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	39	41	46	39	756	28	410	306	25.35	660	154.4	37.5
Brook Trout	>=200mm	1	1	1	1	18	1	10	7	1.28	16	200.0	78.0
Brook Trout	All	40	42	47	40	775	30	420	314	26.67	676	155.5	38.6
Brown Trout	<200mm	21	21	22	21	387	20	210	157	18.04	338	172.9	52.1
Brown Trout	>=200mm	7	7	9	7	129	14	70	52	12.45	113	225.4	108.0
Brown Trout	All	28	28	30	28	517	34	280	209	30.49	451	186.0	66.1
Hatchery Brown Trout	<200mm	1	1	1	1	18	1	10	7	1.14	16	192.0	69.0
Hatchery Brown Trout	>=200mm	12	12	13	12	221	39	120	90	34.84	193	259.5	176.3
Hatchery Brown Trout	All	13	13	14	13	240	40	130	97	35.98	209	254.3	168.0
Hatchery Rainbow Trout	<200mm	1	1	1	1	18	0	10	7	0.08	16	85.0	5.0
Hatchery Rainbow Trout	All	1	1	1	1	18	0	10	7	0.08	16	85.0	5.0
Longnose Dace	All	241	321	377	265	5923	23	3210	2399	20.94	5165	72.7	4.0
Mountain Sucker	All	3	3	4	3	55	2	30	22	2.22	48	161.0	45.0
White Sucker	All	8	8	8	8	148	16	80	60	14.56	129	217.4	110.5

Site Number: 193

Site Midpoint (Latitude, Longitude): 44.01787210, -103.65255431

Survey Completed by: South Dakota Game, Fish and Parks

Stream Classification: BK2, BR3

Date Sampled: 08/28/1995

Site Length (m): 100

Mean Width (m): 2.0

Number of Pass: 3

Conductivity (umhos/cm): 300

pH: 8.6

Water Temperature (C): 17.0

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)
Brook Trout	<200mm	31	31	32	31	1566	61	310	634	54.65	499	153.4	39.1
Brook Trout	>=200mm	5	5	5	5	253	34	50	102	30.48	80	233.8	135.2
Brook Trout	All	36	36	37	36	1818	95	360	736	85.14	579	164.5	52.4
Brown Trout	>=200mm	1	1	1	1	51	11	10	20	9.56	16	276.0	212.0
Brown Trout	All	1	1	1	1	51	11	10	20	9.56	16	276.0	212.0
Hatchery Brown Trout	<200mm	1	1	1	1	51	4	10	20	3.65	16	195.0	81.0
Hatchery Brown Trout	>=200mm	36	36	37	36	1818	356	360	736	318.23	579	262.9	196.0
Hatchery Brown Trout	All	37	37	38	37	1869	361	370	757	321.89	595	261.0	192.9
Longnose Dace	All	28	30	36	28	1515	6	300	614	5.06	483	72.7	3.7
White Sucker	All	4	4	4	4	202	25	40	82	22.19	64	234.5	123.0

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 Slate Creek, 1985-1995

Site 108

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Aug 07, 1995	41	39-46	
Brook Trout >=200mm	Aug 07, 1995	1	1-1	BK3
Brown Trout <200mm	Aug 07, 1995	21	21-22	
Brown Trout >=200mm	Aug 07, 1995	7	7-9	BR2
Hatchery Brown Trout <200mm	Aug 07, 1995	1	1-1	
Hatchery Brown Trout >=200mm	Aug 07, 1995	12	12-13	
Hatchery Rainbow Trout <200mm	Aug 07, 1995	1	1-1	

Longnose Dace	Aug 07, 1995	321	265-377
Mountain Sucker	Aug 07, 1995	3	3-4
White Sucker	Aug 07, 1995	8	8-8

Site 193

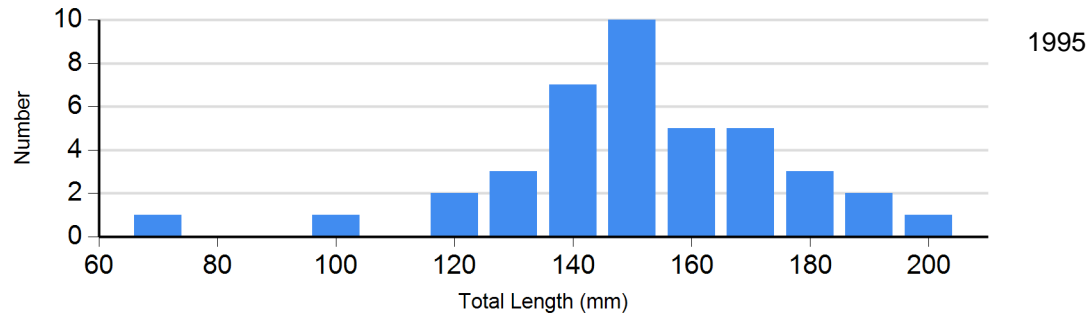
Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Aug 28, 1995	31	31-32	
Brook Trout >=200mm	Aug 28, 1995	5	5-5	BK2
Brown Trout >=200mm	Aug 28, 1995	1	1-1	BR3
Hatchery Brown Trout <200mm	Aug 28, 1995	1	1-1	
Hatchery Brown Trout >=200mm	Aug 28, 1995	36	36-37	
Longnose Dace	Aug 28, 1995	30	28-36	
White Sucker	Aug 28, 1995	4	4-4	

Length Frequency Distribution

Length frequency histogram of species sampled by year.

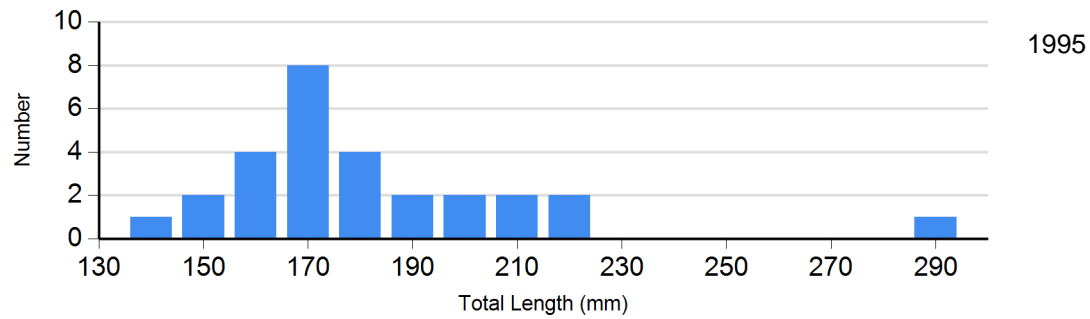
Site: 108

Species: Brook Trout



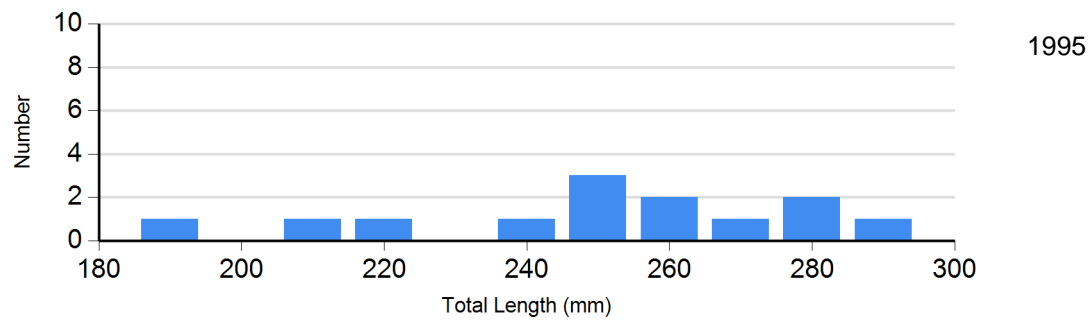
Site: 108

Species: Brown Trout

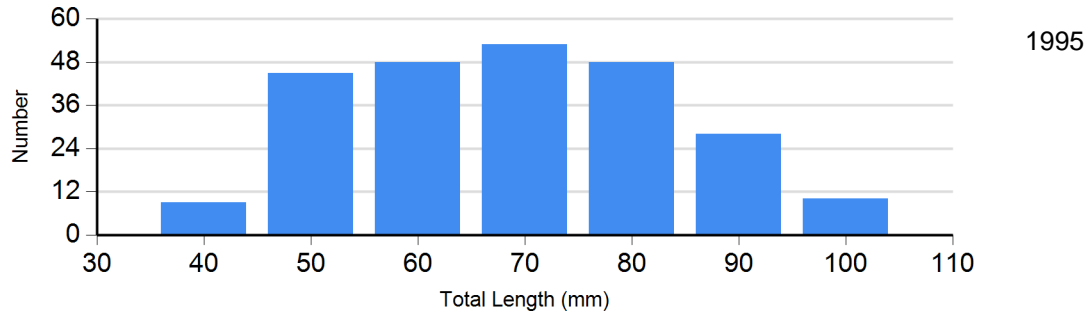


Site: 108

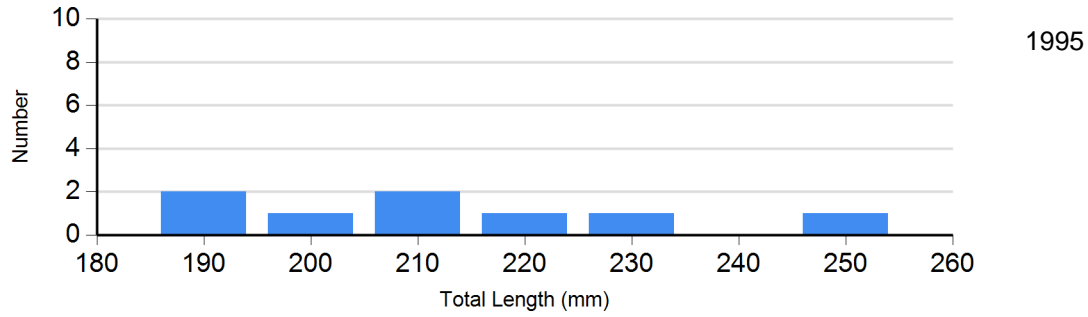
Species: Hatchery Brown Trout



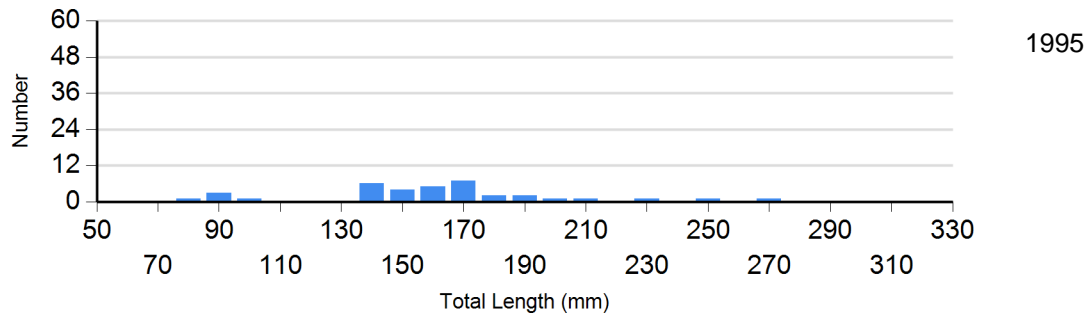
Site: 108
Species: Longnose Dace



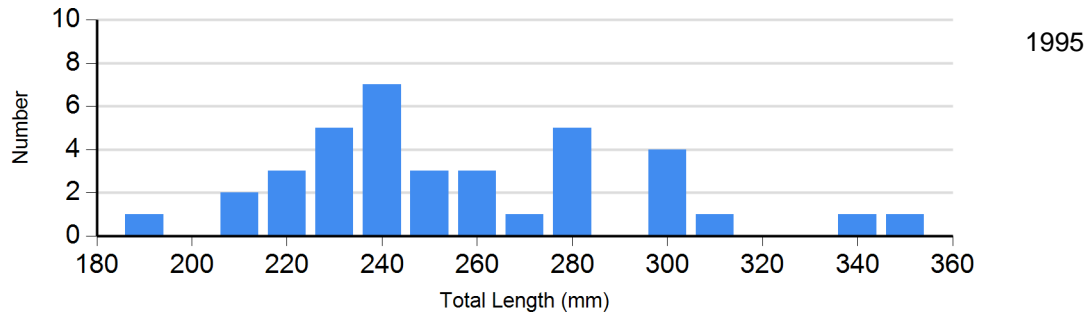
Site: 108
Species: White Sucker



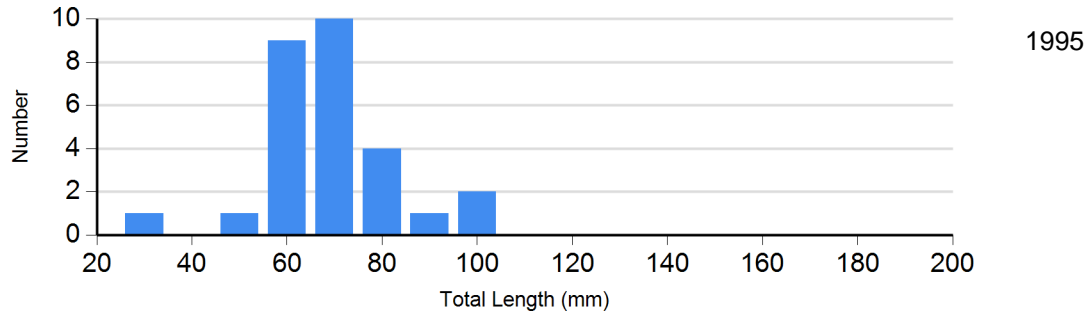
Site: 193
Species: Brook Trout



Site: 193
Species: Hatchery Brown Trout



Site: 193
Species: Longnose Dace



Site: 193
Species: White Sucker

