

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Iron Creek (South), Pennington County
02-0082-00
1993

Table 1. Population and Biomass Estimates for Iron Creek (South)

Site Number: 102	Date Sampled: 07/08/1993	Conductivity (umhos/cm): 62
Site Midpoint (Latitude, Longitude): 43.84271427, -103.40235933	Site Length (m): 100	pH: 8.4
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 4.8	Water Temperature (C): 12.0
Stream Classification: BK0, RB1	Number of Pass: 3	Voltage: 550

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	94	100	108	94	2075	40	1000	840	35.85	1609	125.3	19.4
Brook Trout	All	94	100	108	94	2075	40	1000	840	35.85	1609	125.3	19.4
Hatchery Rainbow Trout	>=200mm	3	3	3	3	62	5	30	25	4.46	48	214.0	80.3
Hatchery Rainbow Trout	All	3	3	3	3	62	5	30	25	4.46	48	214.0	80.3
Longnose Dace	All	40	60	98	40	1245	9	600	504	8.18	965	89.9	7.4
Rainbow Trout	<200mm	22	22	24	22	456	13	220	185	11.78	354	142.2	28.9
Rainbow Trout	>=200mm	5	5	6	5	104	10	50	42	8.85	80	219.6	95.6
Rainbow Trout	All	27	28	31	27	581	24	280	235	21.40	451	156.5	41.3
Unidentified YOY Trout	<200mm	36	58	104	36	1203	1	580	487	1.26	933	53.1	1.2
Unidentified YOY Trout	All	36	58	104	36	1203	1	580	487	1.26	933	53.1	1.2

Site Number: 138	Date Sampled: 07/08/1993	Conductivity (umhos/cm): 65
Site Midpoint (Latitude, Longitude): 43.84047487, -103.42803933	Site Length (m): 100	pH: 8.2
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 3.3	Water Temperature (C): 15.0
Stream Classification: BK3, RB2	Number of Pass: 3	Voltage: 500

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	140	147	155	140	4401	100	1470	1782	89.51	2365	128.3	22.8
Brook Trout	>=200mm	1	1	1	1	30	2	10	12	2.17	16	204.0	81.0
Brook Trout	All	141	148	156	141	4431	103	1480	1795	91.76	2381	128.9	23.2
Longnose Dace	All	2	2	4	2	60	1	20	24	0.48	32	72.0	9.0
Rainbow Trout	<200mm	5	5	5	5	150	6	50	61	5.40	80	158.2	40.4
Rainbow Trout	>=200mm	1	1	1	1	30	2	10	12	2.11	16	205.0	79.0
Rainbow Trout	All	6	6	6	6	180	8	60	73	7.51	97	166.0	46.8
Unidentified YOY Trout	<200mm	57	126	276	57	3772	6	1260	1528	5.43	2027	53.4	1.6
Unidentified YOY Trout	All	57	126	276	57	3772	6	1260	1528	5.43	2027	53.4	1.6

Site Number: 193

Site Midpoint (Latitude, Longitude): 43.82768749, -103.46039550

Survey Completed by: South Dakota Game, Fish and Parks

Stream Classification: BK0, BR0

Date Sampled: 07/07/1993

Site Length (m): 100

Mean Width (m): 3.2

Number of Pass: 3

Conductivity (umhos/cm): 60

pH: 8.5

Water Temperature (C): 9.0

Voltage: 500

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	136	139	144	136	4317	89	1390	1748	79.13	2237	126.4	20.5
Brook Trout	All	136	139	144	136	4317	89	1390	1748	79.13	2237	126.4	20.5
Brown Trout	<200mm	1	1	1	1	31	1	10	13	0.47	16	117.0	17.0
Brown Trout	All	1	1	1	1	31	1	10	13	0.47	16	117.0	17.0
Unidentified YOY Trout	<200mm	87	121	162	87	3758	4	1210	1522	3.36	1947	48.8	1.0
Unidentified YOY Trout	All	87	121	162	87	3758	4	1210	1522	3.36	1947	48.8	1.0

Site Number: 195

Site Midpoint (Latitude, Longitude): 43.82834180, -103.46252843

Survey Completed by: South Dakota Game, Fish and Parks

Stream Classification: BK3

Date Sampled: 07/07/1993

Site Length (m): 100

Mean Width (m): 2.8

Number of Pass: 3

Conductivity (umhos/cm): 63

pH: 8.5

Water Temperature (C): 14.0

Voltage: 500

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	94	98	104	94	3475	80	980	1407	71.30	1577	127.9	23.0
Brook Trout	>=200mm	1	1	2	1	35	5	10	14	4.27	16	239.0	135.0
Brook Trout	All	95	99	105	95	3511	85	990	1422	75.72	1593	129.0	24.2
Unidentified YOY Trout	<200mm	71	156	321	71	5532	6	1560	2240	4.94	2510	46.9	1.0
Unidentified YOY Trout	All	71	156	321	71	5532	6	1560	2240	4.94	2510	46.9	1.0

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 Iron Creek (South), 1983-1993

Site 102

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jul 08, 1993	100	94-108	
Hatchery Rainbow Trout >=200mm	Jul 08, 1993	3	3-3	
Longnose Dace	Jul 08, 1993	60	40-98	
Rainbow Trout <200mm	Jul 08, 1993	22	22-24	
Rainbow Trout >=200mm	Jul 08, 1993	5	5-6	RB1

Site 138

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jul 08, 1993	147	140-155	

Brook Trout >=200mm	Jul 08, 1993	1	1-1	BK3
Longnose Dace	Jul 08, 1993	2	2-4	
Rainbow Trout <200mm	Jul 08, 1993	5	5-5	
Rainbow Trout >=200mm	Jul 08, 1993	1	1-1	RB2

Site 193

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jun 26, 1992	205	200-211	
	Jul 07, 1993	139	136-144	
Brown Trout <200mm	Jun 26, 1992	1	1-1	
	Jul 07, 1993	1	1-1	

Site 195

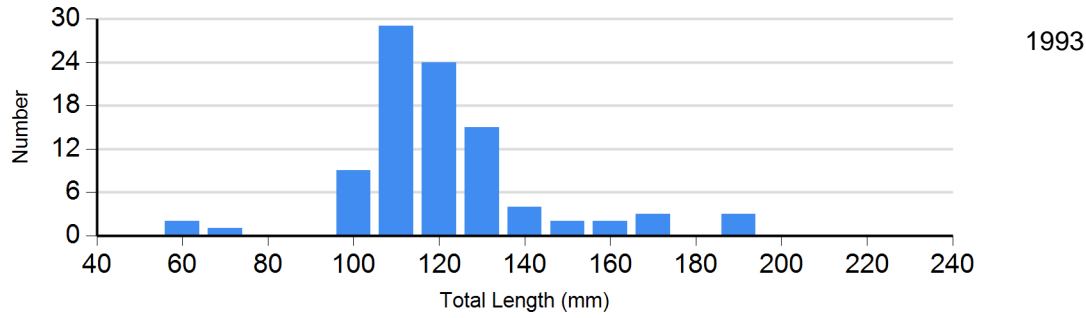
Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jul 06, 1992	206	182-230	
	Jul 07, 1993	98	94-104	
Brook Trout >=200mm	Jul 06, 1992	2	2-3	BK2
	Jul 07, 1993	1	1-2	BK3

Length Frequency Distribution

Length frequency histogram of species sampled by year.

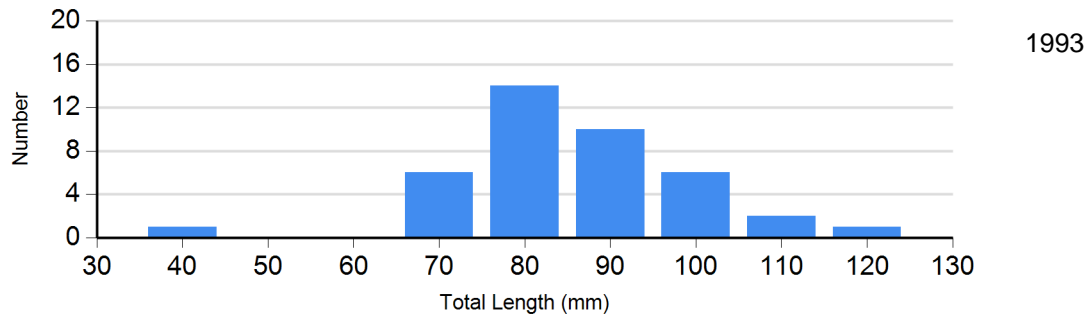
Site: 102

Species: Brook Trout



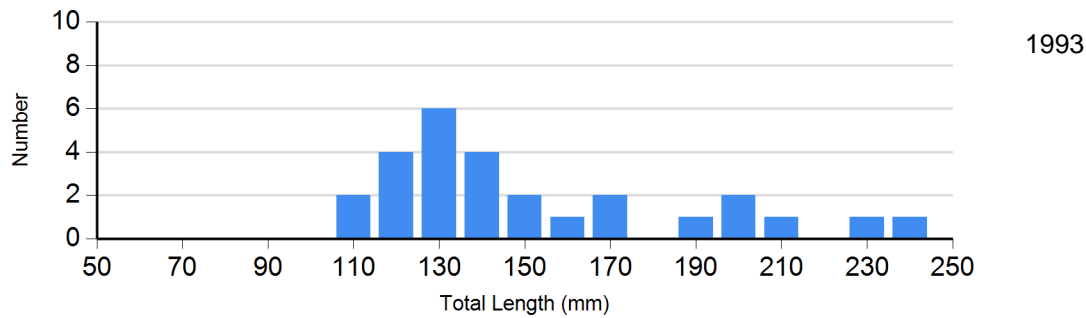
Site: 102

Species: Longnose Dace

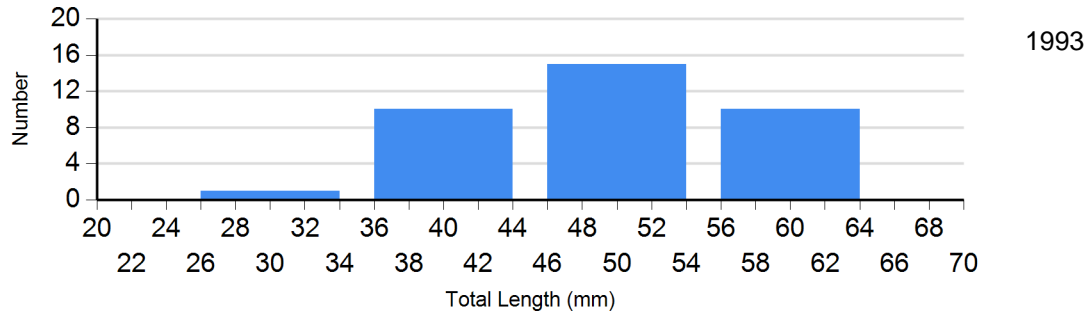


Site: 102

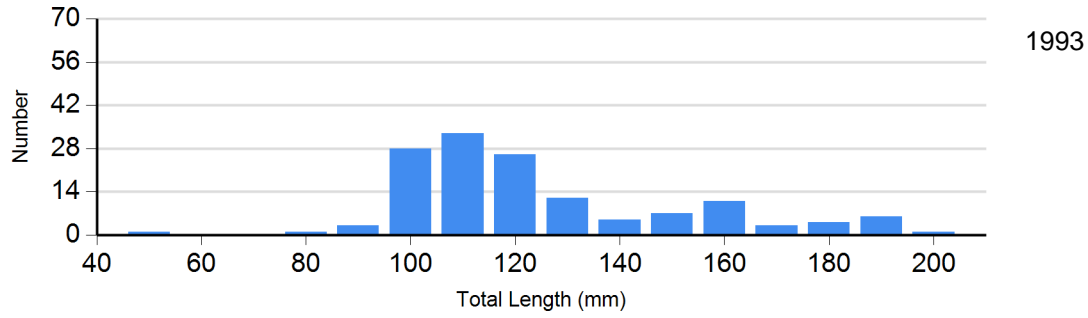
Species: Rainbow Trout



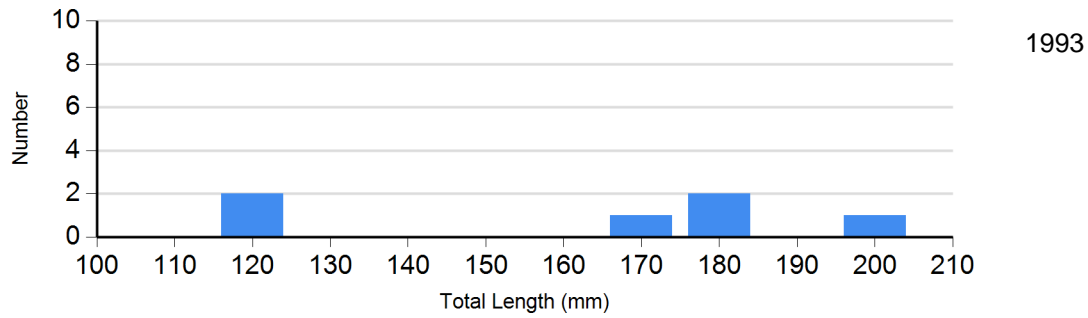
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Species: Unidentified YOY Trout



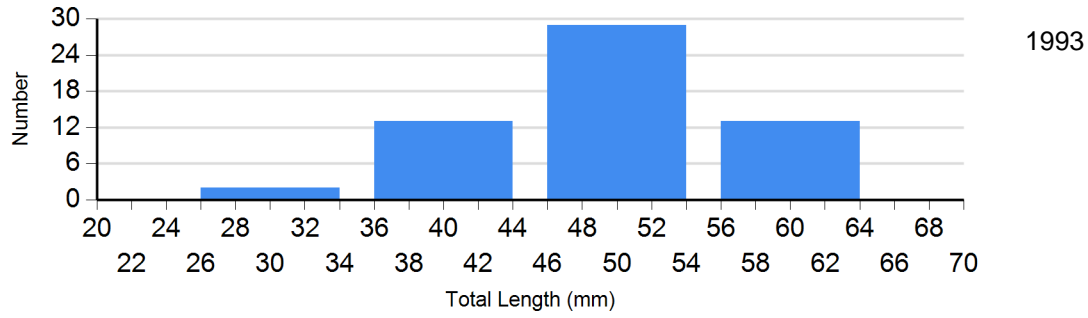
Site: 138
Species: Brook Trout



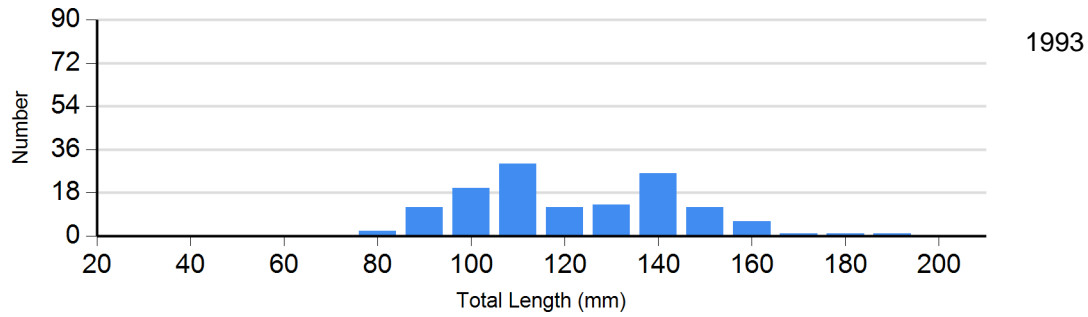
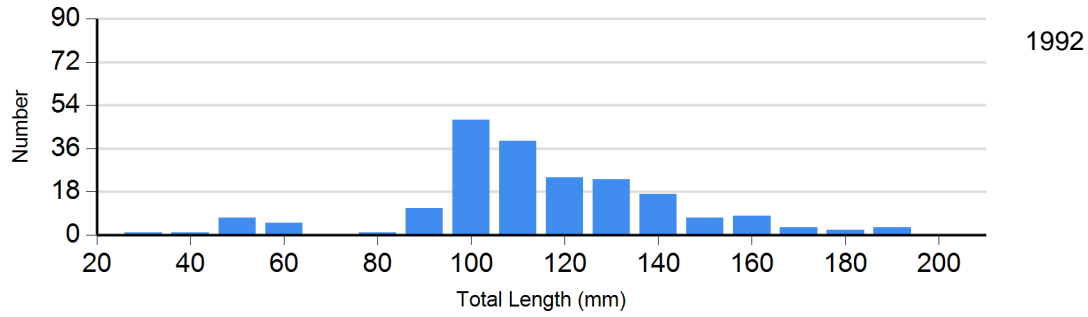
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Species: Rainbow Trout



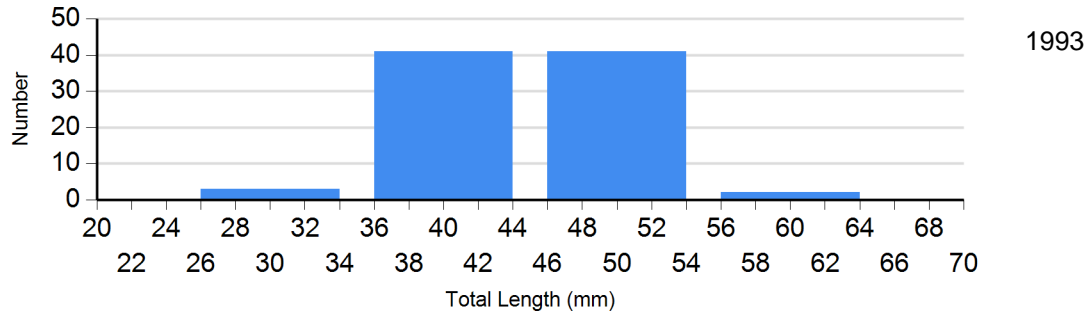
Site: 138
Species: Unidentified YOY Trout



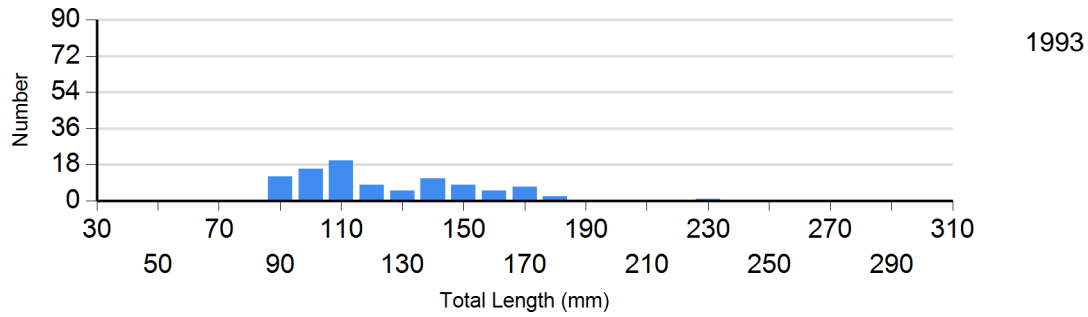
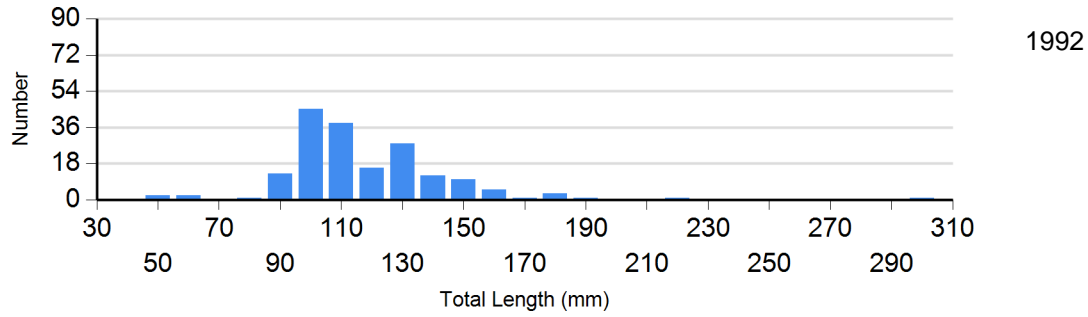
Site: 193
Species: Brook Trout



Site: 193
Species: Unidentified YOY Trout



Site: 195
Species: Brook Trout



Site: 195
Species: Unidentified YOY Trout

