

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Boxelder - Middle Fork, Lawrence County
09-0070-00
1993

Table 1. Population and Biomass Estimates for Boxelder - Middle Fork

Site Number: 35
Site Midpoint (Latitude, Longitude): 44.21336194, -103.62278461
Survey Completed by: South Dakota Game, Fish and Parks
Stream Classification: BK2

Date Sampled: 06/23/1993
Site Length (m): 100
Mean Width (m): 3.0
Number of Pass: 3
Conductivity (umhos/cm): 150
pH: 8.0
Water Temperature (C): 13.0
Voltage: 350

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	88	95	104	88	3146	105	950	1274	93.33	1529	146.3	33.2
Brook Trout	>=200mm	9	9	10	9	298	29	90	121	25.96	145	213.6	97.6
Brook Trout	All	97	105	115	97	3477	136	1050	1408	121.68	1689	152.5	39.2
Longnose Dace	All	8	8	9	8	265	2	80	107	1.45	129	82.5	6.1
Unidentified YOY Trout	<200mm	22	27	39	22	894	1	270	362	1.10	434	57.0	1.4
Unidentified YOY Trout	All	22	27	39	22	894	1	270	362	1.10	434	57.0	1.4

Site Number: 150
Site Midpoint (Latitude, Longitude): 44.19781397, -103.70026584
Survey Completed by: South Dakota Game, Fish and Parks
Stream Classification: None

Date Sampled: 06/23/1993
Site Length (m): 100
Mean Width (m): 2.8
Number of Pass: 3
Conductivity (umhos/cm): 950
pH: 8.4
Water Temperature (C): 16.0
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)
Fathead Minnow	All	2	2	2	2	72	0	20	29	0.26	32	66.0	4.0
Longnose Dace	All	48	61	82	48	2194	16	610	889	13.89	981	83.7	7.1
White Sucker	All	2	2	2	2	72	1	20	29	1.16	32	118.0	18.0

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 Boxelder - Middle Fork, 1983-1993

Site 35

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jun 23, 1993	95	88-104	
Brook Trout >=200mm	Jun 23, 1993	9	9-10	BK2
Longnose Dace	Jun 23, 1993	8	8-9	

Site 150

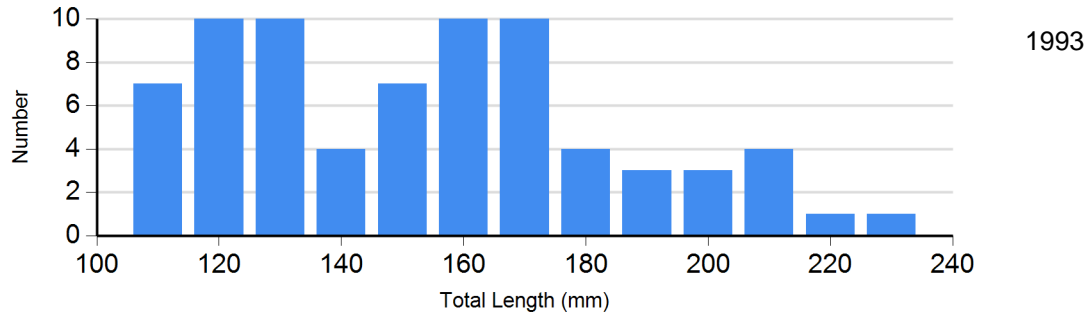
Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Fathead Minnow	Jun 23, 1993	2	2-2	
Longnose Dace	Jun 23, 1993	61	48-82	
White Sucker	Jun 23, 1993	2	2-2	

Length Frequency Distribution

Length frequency histogram of species sampled by year.

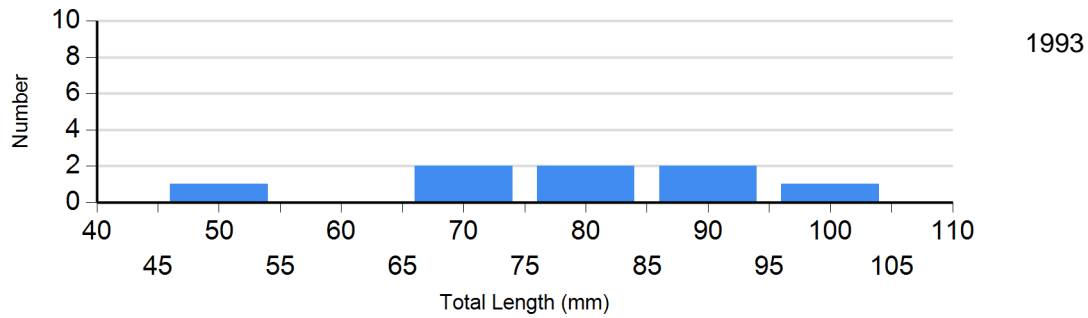
Site: 35

Species: Brook Trout



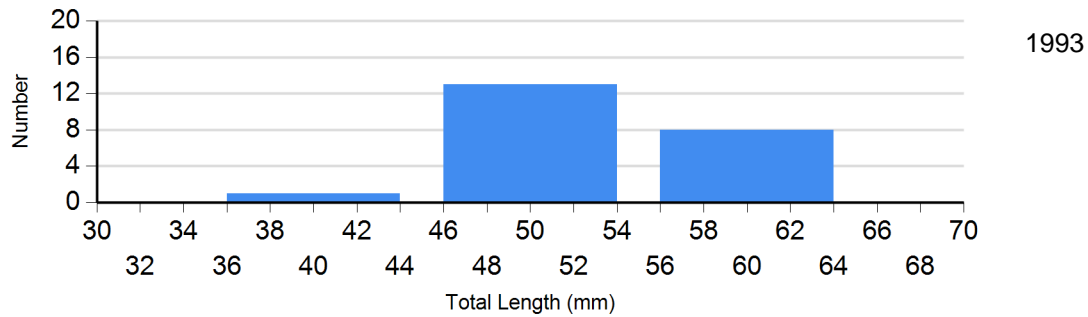
Site: 35

Species: Longnose Dace



Site: 35

Species: Unidentified YOY Trout



Site: 150
Species: Longnose Dace

