

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Sunday Gulch, Pennington County
02-9204-00
1993

Table 1. Population and Biomass Estimates for Sunday Gulch

Site Number: 40	Date Sampled: 06/16/1993	Conductivity (umhos/cm): 49
Site Midpoint (Latitude, Longitude): 43.87169717, -103.57990418	Site Length (m): 100	pH: 8.2
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 1.8	Water Temperature (C): 14.0
Stream Classification: BK0	Number of Pass: 2	Voltage: 650

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	34	55	105	34	3056	97	550	1238	86.50	885	137.9	31.7
Brook Trout	All	34	55	105	34	3056	97	550	1238	86.50	885	137.9	31.7
Longnose Dace	All	20	22	29	20	1222	6	220	495	5.51	354	80.5	5.1
White Sucker	All	18	19	23	18	1056	66	190	428	58.93	306	175.6	62.5

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 Sunday Gulch, 1983-1993

Site 40

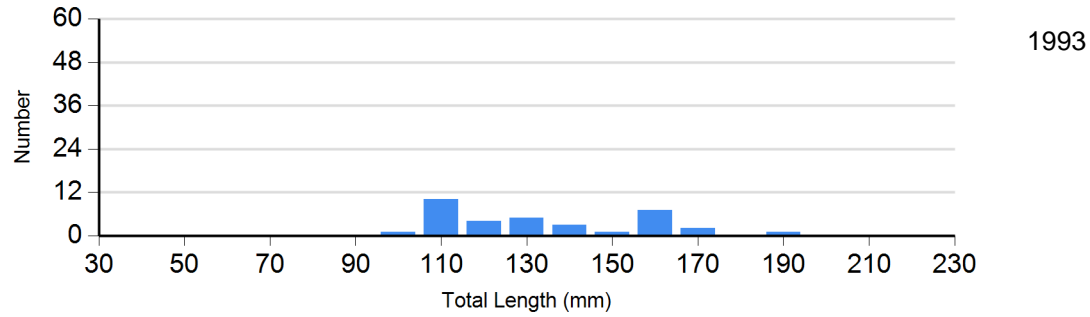
Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jun 16, 1993	55	34-105	
Longnose Dace	Jun 16, 1993	22	20-29	
White Sucker	Jun 16, 1993	19	18-23	

Length Frequency Distribution

Length frequency histogram of species sampled by year.

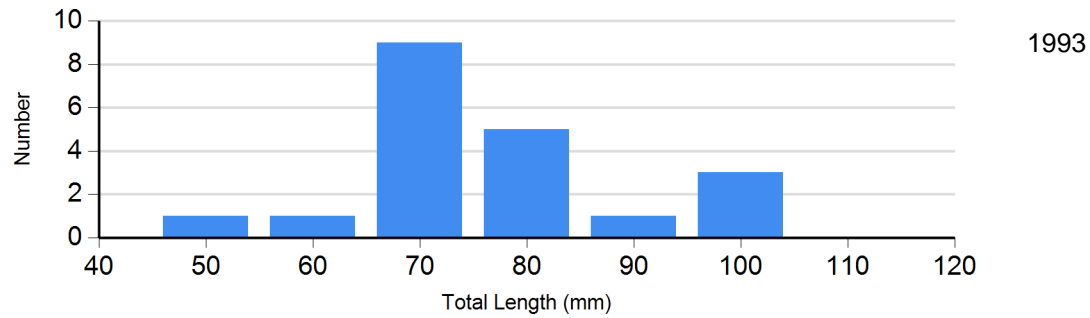
Site: 40

Species: Brook Trout



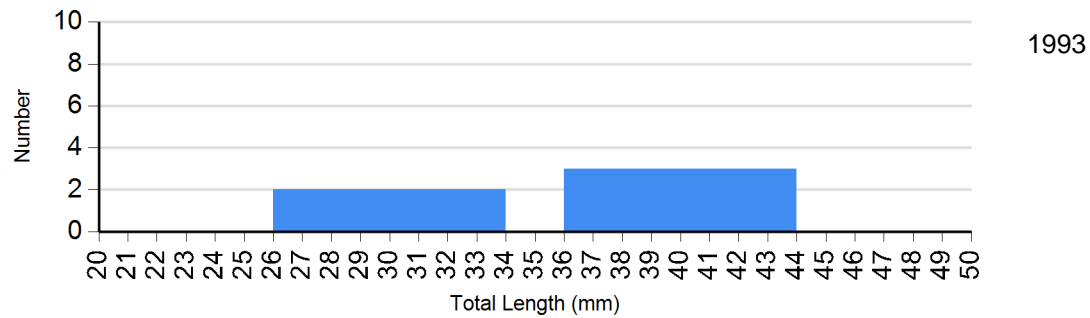
Site: 40

Species: Longnose Dace



Site: 40

Species: Unidentified YOY Trout



Site: 40
Species: White Sucker

