

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Palmer Gulch, Pennington County
02-9211-00
1994

Table 1. Population and Biomass Estimates for Palmer Gulch

Site Number: 102	Date Sampled: 07/05/1994	Conductivity (umhos/cm): 84
Site Midpoint (Latitude, Longitude): 43.89857213, -103.53613880	Site Length (m): 98	pH: 7.8
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 1.4	Water Temperature (C): 20.0
Stream Classification: BK2	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	19	19	21	19	1357	24	194	550	21.24	312	105.2	17.5
Brook Trout	>=200mm	4	4	4	4	286	26	41	116	22.83	66	208.8	89.5
Brook Trout	All	23	23	24	23	1643	51	235	665	45.82	378	123.2	31.2
Longnose Dace	All	65	67	71	65	4786	11	684	1938	9.48	1100	65.0	2.2
White Sucker	All	11	11	12	11	786	15	112	318	13.33	181	118.8	19.0

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 Palmer Gulch, 1984-1994

Site 102

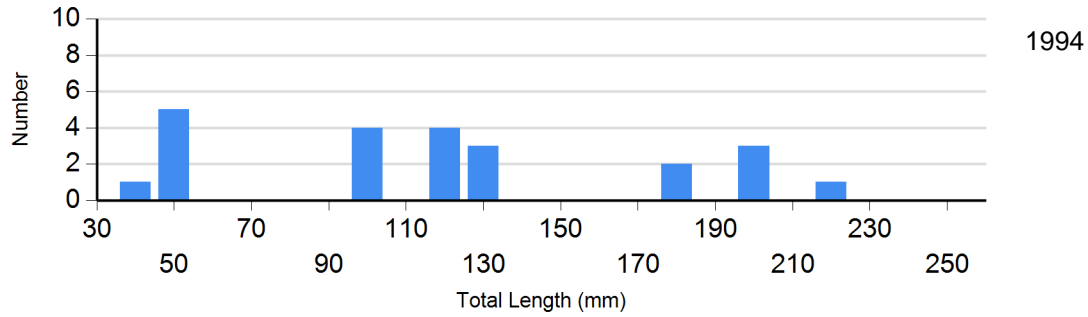
Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jul 05, 1994	19	19-21	
Brook Trout >=200mm	Jul 05, 1994	4	4-4	BK2
Longnose Dace	Jul 05, 1994	67	65-71	
White Sucker	Jul 05, 1994	11	11-12	

Length Frequency Distribution

Length frequency histogram of species sampled by year.

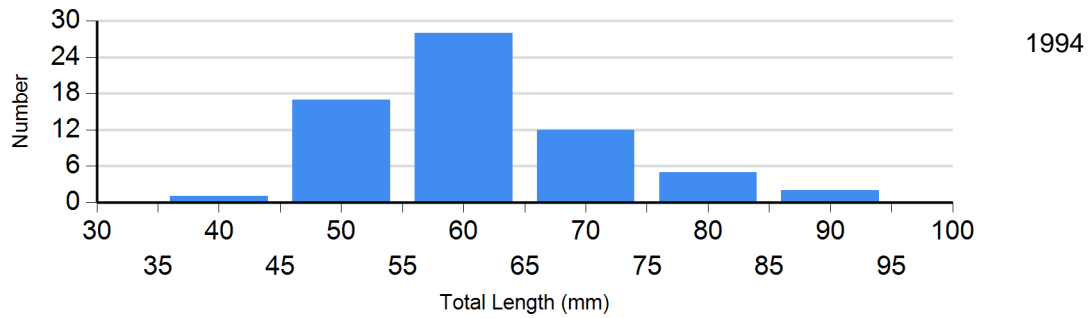
Site: 102

Species: Brook Trout



Site: 102

Species: Longnose Dace



Site: 102

Species: White Sucker

