

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Willow Creek (Trib. of Palmer), Pennington County
02-0148-00
2015

Table 1. Population and Biomass Estimates for Willow Creek (Trib. of Palmer)

Site Number: 4	Date Sampled: 06/24/2015	Conductivity (umhos/cm): 69
Site Midpoint (Latitude, Longitude): 43.89524998, -103.53633596	Site Length (m): 100	pH: 7.1
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 2.2	Water Temperature (C): 12.9
Stream Classification: BK2	Number of Pass: 3	Voltage: 450

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	46	211	1022	46	9591	315	2110	3884	280.83	3395	106.4	32.8
Brook Trout	>=200mm	7	7	9	7	318	47	70	129	42.41	113	223.4	149.3
Brook Trout	All	53	166	522	53	7545	398	1660	3056	354.93	2671	121.9	52.7

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 Willow Creek (Trib. of Palmer), 2005-2015

Site 4

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jun 11, 2009	9	9-9	
	Jun 24, 2015	211	46-1022	
Brook Trout >=200mm	Jun 24, 2015	7	7-9	BK2

Length Frequency Distribution

Length frequency histogram of species sampled by year.

Site: 4

Species: Brook Trout

