

**SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY**  
**Patterson Creek, Pennington County**  
**10170203010031**  
**All Years**

Table 1. Population and Biomass Estimates for Patterson Creek

<b>Site Number:</b> 11	<b>Date Sampled:</b> 09/10/2015	<b>Conductivity (umhos/cm):</b> 273
<b>Site Midpoint (Latitude, Longitude):</b> 43.94809151, -103.60108327	<b>Site Length (m):</b> 100	<b>pH:</b> 8.3
<b>Survey Completed by:</b> South Dakota Game, Fish and Parks	<b>Mean Width (m):</b> 2.2	<b>Water Temperature (C):</b> 11.4
<b>Stream Classification:</b> BK1	<b>Number of Pass:</b> 3	<b>Voltage:</b> 400

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	89	92	88	4062	178	890	1645	159.33	1432	153.6	43.9
Brook Trout	>=200mm	13	13	13	13	593	67	130	240	59.70	209	218.1	112.7
Brook Trout	All	101	101	103	101	4610	246	1010	1867	219.54	1625	161.9	53.3

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	
<b>Class BR1</b>	Number of wild Brown Trout exceeds 150 per acre
<b>Class BR2</b>	Number of wild Brook Trout ranges from 25 to 150 per acre
<b>Class BR3</b>	Number of wild Brown Trout is less than 25 per acre
<b>Class BK1</b>	Number of wild Brook Trout exceeds 150 per acre
<b>Class BK2</b>	Number of wild Brook Trout ranges from 25 to 150 per acre
<b>Class BK3</b>	Number of wild Brook Trout is less than 25 per acre
<b>Class RB1</b>	Number of wild Rainbow Trout exceeds 25 per acre
<b>Class RB2</b>	Number of wild Rainbow Trout is less than 25 per acre

Table 2. Species composition and population estimates on Patterson Creek, 2005-2015

**Site 11**

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Sep 10, 2015	89	88-92	
Brook Trout >=200mm	Sep 10, 2015	13	13-13	BK1

## Length Frequency Distribution

Length frequency histogram of species sampled by year.

**Site:** 11

**Species:** Brook Trout

