

**SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY**  
**Sunday Gulch, Pennington County**  
**02-9204-00**  
**2015**

Table 1. Population and Biomass Estimates for Sunday Gulch

<b>Site Number:</b> 40	<b>Date Sampled:</b> 07/13/2015	<b>Conductivity (umhos/cm):</b> 113
<b>Site Midpoint (Latitude, Longitude):</b> 43.87169717, -103.57990418	<b>Site Length (m):</b> 100	<b>pH:</b> 7.5
<b>Survey Completed by:</b> South Dakota Game, Fish and Parks	<b>Mean Width (m):</b> 1.7	<b>Water Temperature (C):</b> 17.5
<b>Stream Classification:</b> BK1	<b>Number of Pass:</b> 3	<b>Voltage:</b> 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	34	34	36	34	2055	91	340	832	81.50	547	147.6	44.4
Brook Trout	>=200mm	8	8	8	8	484	53	80	196	47.17	129	211.9	109.3
Brook Trout	All	42	42	44	42	2538	147	420	1028	130.82	676	159.9	57.7
Longnose Dace	All	9	40	380	9	2418	24	400	979	21.11	644	97.6	9.8

<b>Site Number:</b> 57	<b>Date Sampled:</b> 07/14/2015	<b>Conductivity (umhos/cm):</b> 90
<b>Site Midpoint (Latitude, Longitude):</b> 43.86237180, -103.58106466	<b>Site Length (m):</b> 100	<b>pH:</b> 7.2
<b>Survey Completed by:</b> South Dakota Game, Fish and Parks	<b>Mean Width (m):</b> 1.5	<b>Water Temperature (C):</b> 13.0
<b>Stream Classification:</b> BK2	<b>Number of Pass:</b> 3	<b>Voltage:</b> 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	73	74	77	73	4994	149	740	2023	133.10	1191	127.8	29.9
Brook Trout	>=200mm	2	2	2	2	135	14	20	55	12.23	32	207.5	101.5
Brook Trout	All	75	76	79	75	5129	164	760	2077	146.21	1223	129.9	31.9

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 Sunday Gulch, 2005-2015

**Site 40**

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jul 13, 2015	34	34-36	
Brook Trout >=200mm	Jul 13, 2015	8	8-8	BK1
Longnose Dace	Jul 13, 2015	40	9-380	

**Site 57**

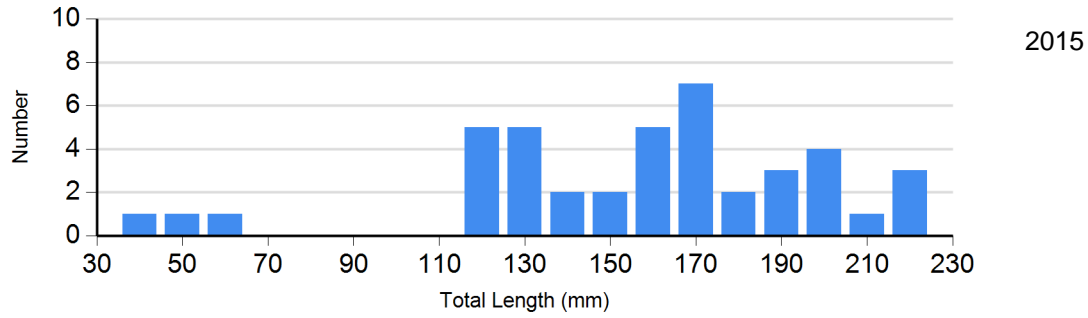
Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jul 14, 2015	74	73-77	
Brook Trout >=200mm	Jul 14, 2015	2	2-2	BK2

## Length Frequency Distribution

Length frequency histogram of species sampled by year.

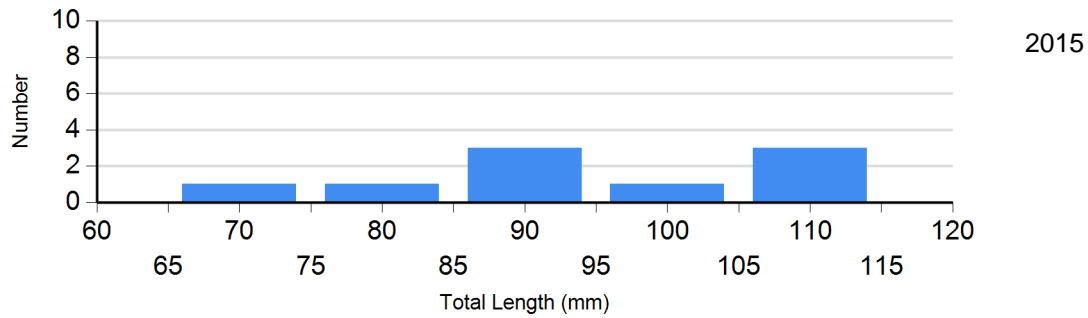
**Site:** 40

**Species:** Brook Trout



**Site:** 40

**Species:** Longnose Dace



**Site:** 57

**Species:** Brook Trout

