

**SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY**  
**Marshall Gulch, Pennington County**  
**02-9221-00**  
**All Years**

Table 1. Population and Biomass Estimates for Marshall Gulch

**Site Number:** 36  
**Site Midpoint (Latitude, Longitude):** 43.96438655, -103.56966464  
**Survey Completed by:** South Dakota Game, Fish and Parks  
**Stream Classification:** BK1

**Date Sampled:** 08/24/2015  
**Site Length (m):** 100  
**Mean Width (m):** 2.0  
**Number of Pass:** 3  
**Conductivity (umhos/cm):** 160  
**pH:** 7.6  
**Water Temperature (C):** 16.0  
**Voltage:** 275

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)
Banded Killifish	All	1	1	1	1	50	1	10	20	0.76	16	112.0	17.0
Brook Trout	<200mm	200	206	213	200	10253	352	2060	4153	314.63	3315	124.0	34.4
Brook Trout	>=200mm	12	12	12	12	597	65	120	242	58.22	193	217.1	109.2
Brook Trout	All	212	217	223	212	10801	435	2170	4374	388.76	3492	129.3	40.3
Longnose Dace	All	4	8	42	4	398	5	80	161	4.86	129	99.5	13.7

**Site Number:** 48  
**Site Midpoint (Latitude, Longitude):** 43.96988938, -103.56688384  
**Survey Completed by:** South Dakota Game, Fish and Parks  
**Stream Classification:** BK2

**Date Sampled:** 06/17/2015  
**Site Length (m):** 100  
**Mean Width (m):** 3.4  
**Number of Pass:** 3  
**Conductivity (umhos/cm):** 133  
**pH:** 7.6  
**Water Temperature (C):** 15.2  
**Voltage:** 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	51	54	60	51	1601	66	540	648	59.18	869	126.0	41.4
Brook Trout	>=200mm	4	4	4	4	119	35	40	48	31.34	64	285.8	296.0
Brook Trout	All	55	58	64	55	1720	111	580	696	99.11	933	137.6	64.5
Longnose Dace	All	4	8	42	4	237	3	80	96	2.86	129	82.8	13.5

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	
<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 Marshall Gulch, 2005-2015

**Site 36**

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Banded Killifish	Aug 24, 2015	1	1-1	
Brook Trout <200mm	Aug 24, 2015	206	200-213	
Brook Trout >=200mm	Aug 24, 2015	12	12-12	BK1
Longnose Dace	Aug 24, 2015	8	4-42	

**Site 48**

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jun 17, 2015	54	51-60	
Brook Trout >=200mm	Jun 17, 2015	4	4-4	BK2

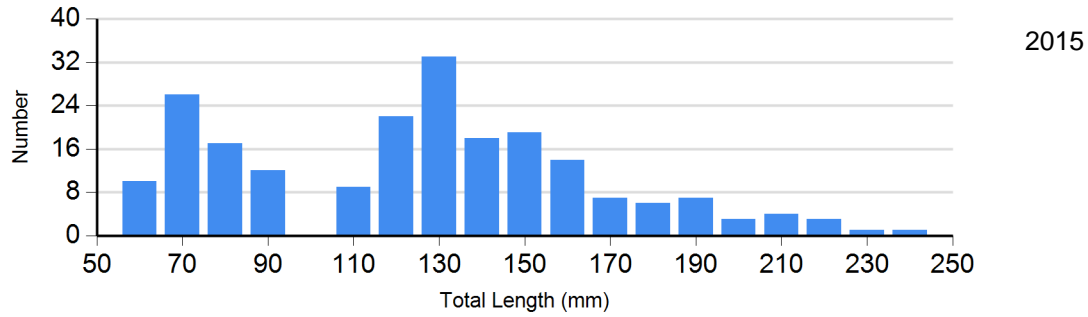


## Length Frequency Distribution

Length frequency histogram of species sampled by year.

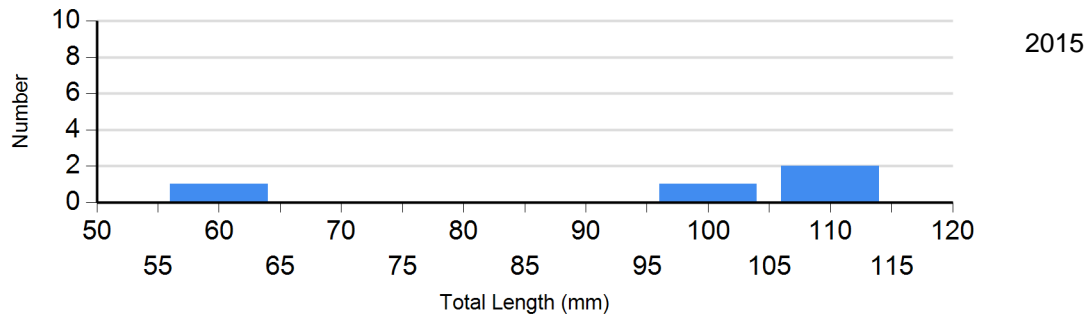
**Site:** 36

**Species:** Brook Trout



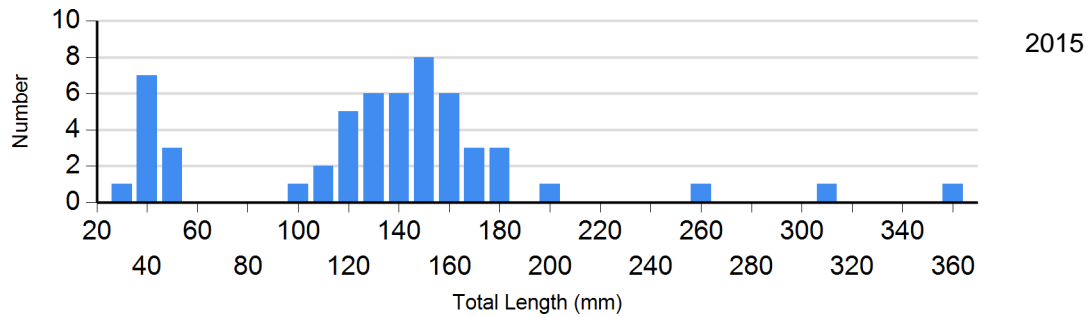
**Site:** 36

**Species:** Longnose Dace



**Site:** 48

**Species:** Brook Trout



Site: 48  
Species: Longnose Dace

