

**SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY**  
**Whitetail Creek, Lawrence County**  
**09-0059-00**  
**1997**

Table 1. Population and Biomass Estimates for Whitetail Creek

**Site Number:** 2  
**Site Midpoint (Latitude, Longitude):** 44.34320234, -103.75974705  
**Survey Completed by:** OEA Research Inc.  
**Stream Classification:** BK2, BR3

**Date Sampled:** 09/24/1997  
**Site Length (m):** 50  
**Mean Width (m):** 4.4  
**Number of Pass:** 4  
**Conductivity (umhos/cm):**  
**pH:**  
**Water Temperature (C):**  
**Voltage:**

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	197	200	204	197	4545	77	4000	1841	68.58	6436	110.3	16.9
Brook Trout	>=200mm	7	7	9	7	159	24	140	64	21.12	225	237.0	148.7
Brook Trout	All	204	207	211	204	4705	101	4140	1905	89.98	6661	114.6	21.4
Brown Trout	<200mm	16	16	16	16	364	15	320	147	13.15	515	140.4	40.5
Brown Trout	>=200mm	1	1	1	1	23	4	20	9	4.00	32	255.0	197.0
Brown Trout	All	17	17	17	17	386	19	340	156	17.15	547	147.1	49.7

**Site Number:** 50  
**Site Midpoint (Latitude, Longitude):** 44.32465294, -103.79815239  
**Survey Completed by:** Chadwick Ecological Services  
**Stream Classification:** BK3

**Date Sampled:** 09/04/1997  
**Site Length (m):** 100  
**Mean Width (m):** 1.7  
**Number of Pass:** 2  
**Conductivity (umhos/cm):**  
**pH:**  
**Water Temperature (C):**  
**Voltage:**

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	1118	52	190	453	46.67	306	162.5	46.8
Brook Trout	>=200mm	1	1	1	1	59	7	10	24	5.83	16	215.0	111.0
Brook Trout	All	20	20	22	20	1176	59	200	476	52.50	322	165.1	50.0

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	
<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 Whitetail Creek, 1987-1997

**Site 2**

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jul 15, 1993	75	73-80	
	Jun 07, 1995	19	19-19	
	Sep 27, 1996	308	299-317	
	Sep 24, 1997	200	197-204	
Brook Trout >=200mm	Jul 15, 1993	5	5-5	BK2
	Jun 07, 1995	1	1-1	BK3
	Sep 27, 1996	10	10-10	BK3

Brook Trout >=200mm	Sep 24, 1997	7	7-9	BK2
Brown Trout <200mm	Jul 15, 1993	10	10-12	
	Jun 07, 1995	1	1-1	
	Sep 27, 1996	25	24-29	
	Sep 24, 1997	16	16-16	
Brown Trout >=200mm	Jun 07, 1995	1	1-1	BR3
	Sep 24, 1997	1	1-1	BR3

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**Site 50**

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<b>Species/Size</b>	<b>Date</b>	<b>Pop Est.</b>	<b>(95% C.I.)</b>	<b>Stream Classification</b>
Brook Trout <200mm	Sep 04, 1997	19	19-21	
Brook Trout >=200mm	Sep 04, 1997	1	1-1	BK3

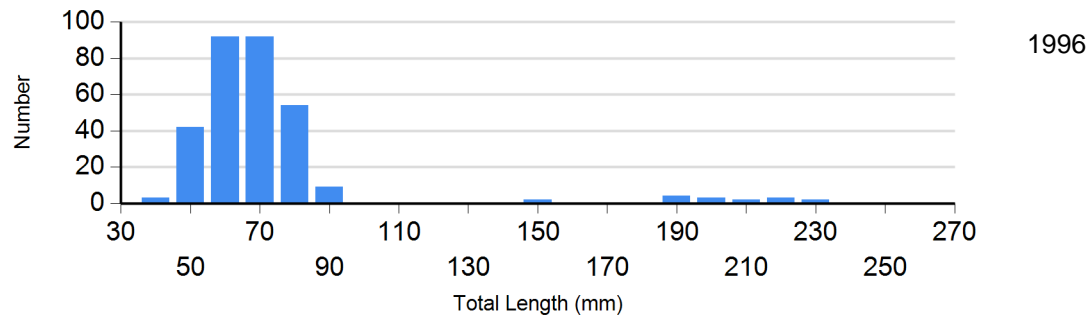
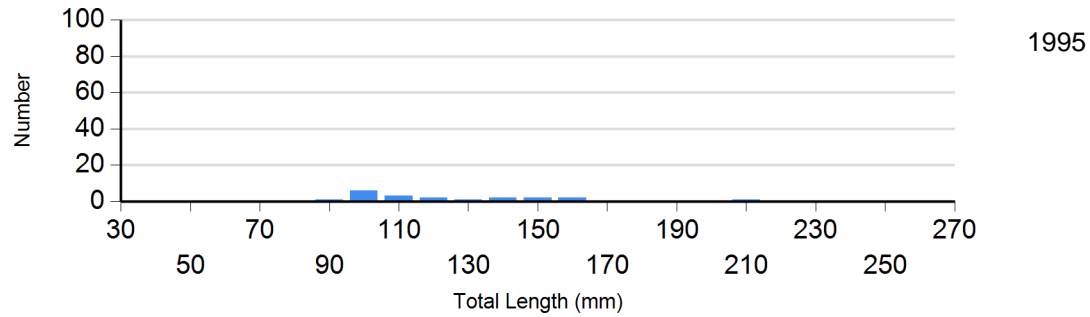
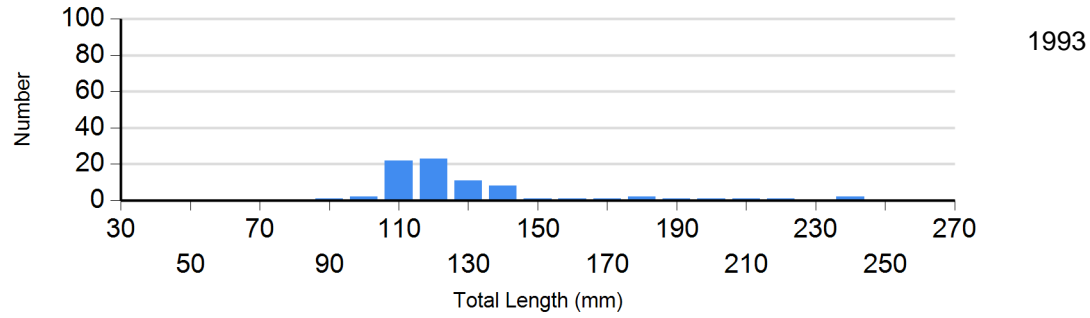
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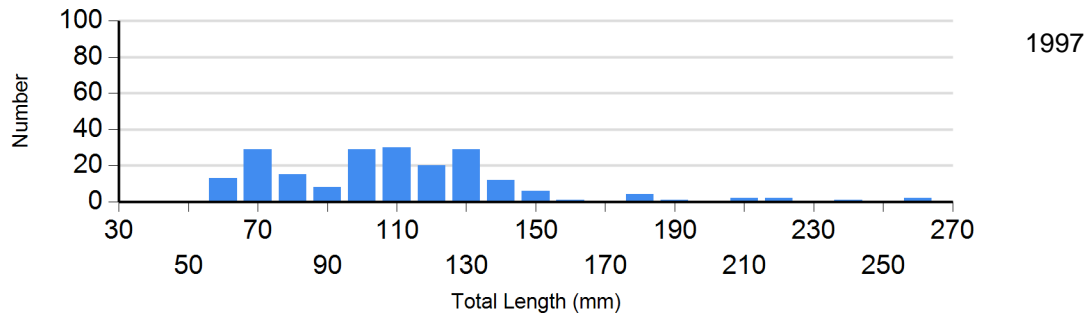
## Length Frequency Distribution

Length frequency histogram of species sampled by year.

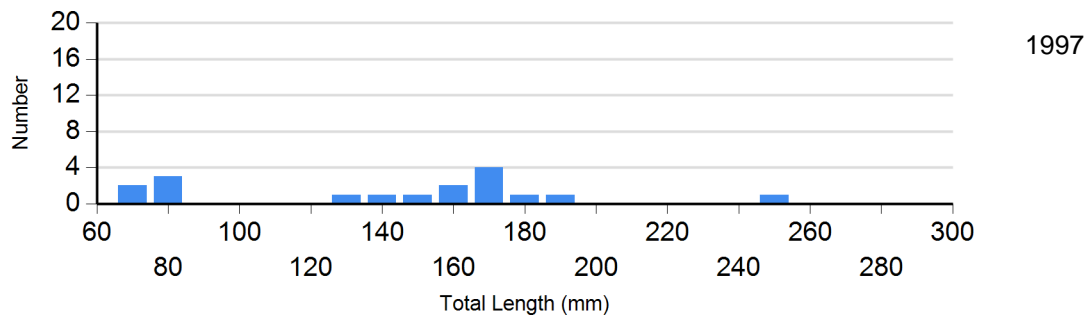
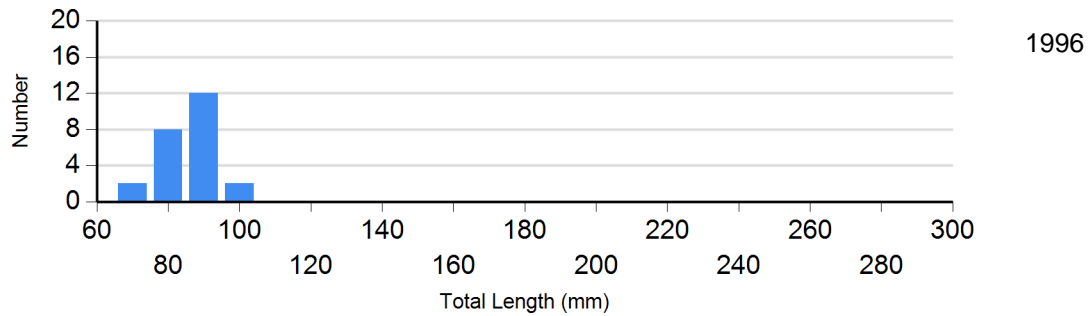
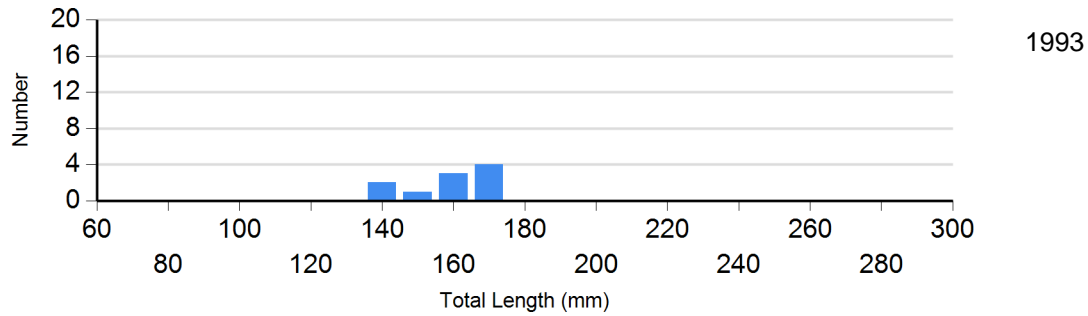
**Site:** 2

**Species:** Brook Trout





Site: 2  
Species: Brown Trout



Site: 50  
Species: Brook Trout

