

**SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY**  
**Little Elk Creek, Lawrence County**  
**09-0027-00**  
**1995**

Table 1. Population and Biomass Estimates for Little Elk Creek

<b>Site Number:</b> 43	<b>Date Sampled:</b> 06/06/1995	<b>Conductivity (umhos/cm):</b> 300
<b>Site Midpoint (Latitude, Longitude):</b> 44.24540951, -103.43100115	<b>Site Length (m):</b> 100	<b>pH:</b> 9.2
<b>Survey Completed by:</b> South Dakota Game, Fish and Parks	<b>Mean Width (m):</b> 5.5	<b>Water Temperature (C):</b> 15.0
<b>Stream Classification:</b> BK3	<b>Number of Pass:</b> 3	<b>Voltage:</b> 300

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	64	94	46	1168	21	640	473	18.49	1030	116.0	17.7
Brook Trout	>=200mm	1	1	2	1	18	2	10	7	1.38	16	242.0	85.0
Brook Trout	All	47	66	98	47	1204	23	660	488	20.64	1062	118.7	19.2

<b>Site Number:</b> 94	<b>Date Sampled:</b> 06/05/1995	<b>Conductivity (umhos/cm):</b> 310
<b>Site Midpoint (Latitude, Longitude):</b> 44.23117161, -103.47195732	<b>Site Length (m):</b> 100	<b>pH:</b> 9.2
<b>Survey Completed by:</b> South Dakota Game, Fish and Parks	<b>Mean Width (m):</b> 4.6	<b>Water Temperature (C):</b> 12.0
<b>Stream Classification:</b> BK2, RB2	<b>Number of Pass:</b> 3	<b>Voltage:</b> 250

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	67	72	80	67	1572	59	720	637	52.69	1158	151.8	37.5
Brook Trout	>=200mm	12	12	14	12	262	34	120	106	30.26	193	232.2	129.3
Brook Trout	All	79	85	93	79	1856	96	850	752	85.31	1368	164.0	51.5
Fathead Minnow	All	2	2	3	2	44	0	20	18	0.12	32	60.0	3.0
Hatchery Rainbow Trout	>=200mm	2	2	4	2	44	6	20	18	5.58	32	251.5	143.0

Hatchery Rainbow Trout	All	2	2	4	2	44	6	20	18	5.58	32	251.5	143.0
Rainbow Trout	>=200mm	1	1	1	1	22	2	10	9	1.83	16	218.0	94.0
Rainbow Trout	All	1	1	1	1	22	2	10	9	1.83	16	218.0	94.0

**Site Number:** 119

**Site Midpoint (Latitude, Longitude):** 44.23747736, -103.48934721

**Survey Completed by:** South Dakota Game, Fish and Parks

**Stream Classification:** BK2

**Date Sampled:** 06/06/1995

**Site Length (m):** 100

**Mean Width (m):** 3.7

**Number of Pass:** 3

**Conductivity (umhos/cm):** 320

**pH:** 9.0

**Water Temperature (C):** 17.0

**Voltage:** 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	25	28	36	25	749	22	280	303	19.44	451	139.2	29.1
Brook Trout	>=200mm	10	10	10	10	267	38	100	108	34.21	161	228.8	143.3
Brook Trout	All	35	37	42	35	989	61	370	401	54.51	595	164.8	61.7

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	
<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 Little Elk Creek, 1985-1995

**Site 43**

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jun 06, 1995	64	46-94	
Brook Trout >=200mm	Jun 06, 1995	1	1-2	BK3

**Site 94**

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jun 05, 1995	72	67-80	
Brook Trout >=200mm	Jun 05, 1995	12	12-14	BK2
Fathead Minnow	Jun 05, 1995	2	2-3	
Hatchery Rainbow Trout >=200mm	Jun 05, 1995	2	2-4	

Rainbow Trout >=200mm

Jun 05, 1995

1

1-1

RB2

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**Site 119**

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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	Jun 06, 1995	28	25-36	
Brook Trout >=200mm	Jun 06, 1995	10	10-10	BK2

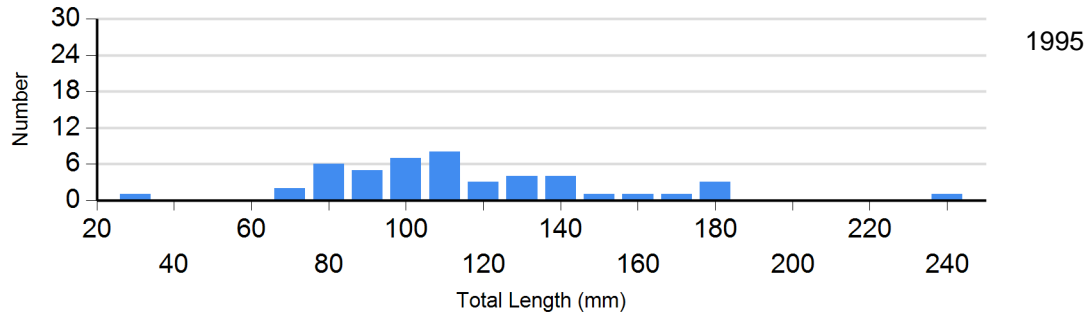
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## Length Frequency Distribution

Length frequency histogram of species sampled by year.

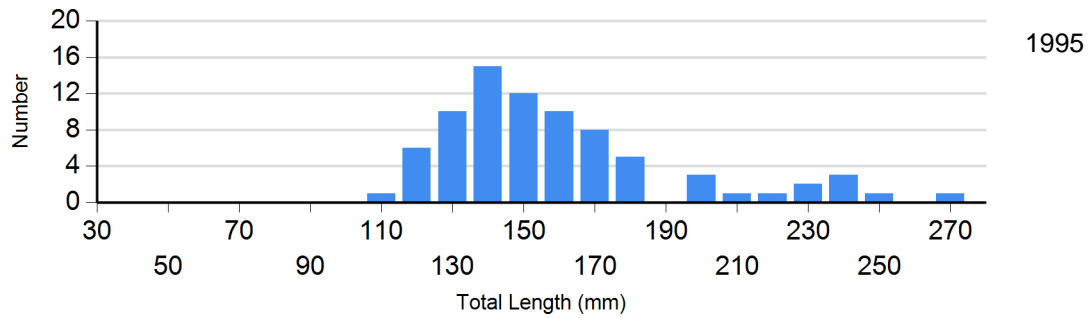
**Site:** 43

**Species:** Brook Trout



**Site:** 94

**Species:** Brook Trout



**Site:** 119

**Species:** Brook Trout

