

**SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY**  
**Deadwood Creek, Lawrence County**  
**09-0060-00**  
**2017**

Table 1. Population and Biomass Estimates for Deadwood Creek

**Site Number:** 8  
**Site Midpoint (Latitude, Longitude):** 44.37166357, -103.73844669  
**Survey Completed by:** GEI  
**Stream Classification:** BK2

**Date Sampled:** 08/28/2017  
**Site Length (m):** 100  
**Mean Width (m):** 3.8  
**Number of Pass:** 3

**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	291	297	304	291	7797	44	2970	3158	39.30	4779	71.0	5.6
Brook Trout	>=200mm	3	3	3	3	79	7	30	32	6.45	48	212.7	91.7
Brook Trout	All	294	300	306	294	7876	51	3000	3190	45.89	4827	72.5	6.5

**Site Number:** 9  
**Site Midpoint (Latitude, Longitude):** 44.37126918, -103.73941917  
**Survey Completed by:** GEI  
**Stream Classification:** BK2

**Date Sampled:** 08/31/2017  
**Site Length (m):** 100  
**Mean Width (m):** 3.0  
**Number of Pass:** 3

**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	134	148	162	134	4963	42	1480	2010	37.50	2381	83.6	8.5
Brook Trout	>=200mm	3	3	4	3	101	11	30	41	9.76	48	220.0	108.7
Brook Trout	All	137	151	165	137	5064	54	1510	2051	48.19	2430	86.6	10.7

**Site Number:** 11  
**Site Midpoint (Latitude, Longitude):** 44.36995592, -103.74076877

**Date Sampled:** 08/30/2017  
**Site Length (m):** 100

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

Survey Completed by: GEI

Mean Width (m): 4.3

Water Temperature (C):

Stream Classification: BK2

Number of Pass: 3

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	146	146	148	146	3395	49	1460	1375	44.12	2349	100.9	14.6
Brook Trout	>=200mm	7	7	7	7	163	19	70	66	17.36	113	227.0	119.4
Brook Trout	All	153	153	155	153	3558	69	1530	1441	61.48	2462	106.7	19.4

Site Number: 15

Date Sampled: 05/12/2017

Conductivity (umhos/cm):

Site Midpoint (Latitude, Longitude): 44.37074701, -103.74538988

Site Length (m): 100

pH:

Survey Completed by: South Dakota Game, Fish and Parks

Mean Width (m): 2.8

Water Temperature (C): 18.7

Stream Classification: BK0

Number of Pass: 3

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	24	24	24	24	868	27	240	352	23.78	386	134.4	30.7
Brook Trout	All	24	24	24	24	868	27	240	352	23.78	386	134.4	30.7

Site Number: 49

Date Sampled: 08/31/2017

Conductivity (umhos/cm):

Site Midpoint (Latitude, Longitude): 44.36269958, -103.78234679

Site Length (m): 100

pH:

Survey Completed by: GEI

Mean Width (m): 2.3

Water Temperature (C):

Stream Classification: BK3

Number of Pass: 3

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	324	346	361	331	14809	63	3460	5998	56.57	5567	68.3	4.3
Brook Trout	>=200mm	1	1	1	1	43	4	10	17	3.29	16	202.0	86.0
Brook Trout	All	325	347	362	332	14852	67	3470	6015	60.11	5583	68.7	4.5

Site Number: 72

Site Midpoint (Latitude, Longitude): 44.35884420, -103.80543515

Survey Completed by: GEI

Stream Classification: BK0

Date Sampled: 08/25/2017

Site Length (m): 100

Mean Width (m): 2.3

Number of Pass: 3

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	218	219	222	218	9598	83	2190	3887	73.74	3524	91.2	8.6
Brook Trout	All	218	219	222	218	9598	83	2190	3887	73.74	3524	91.2	8.6

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 Deadwood Creek, 2007-2017

**Site 8**

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Sep 09, 2008	41	41-42	
	Sep 01, 2009	109	103-117	
	Aug 31, 2010	1	1-1	
	Aug 28, 2012	126	123-131	
	Aug 27, 2014	343	335-351	
	Sep 02, 2015	193	185-201	
	Aug 28, 2017	297	291-304	

Brook Trout >=200mm	Sep 09, 2008	5	5-5	BK3
	Sep 01, 2009	5	5-5	BK3
	Aug 28, 2012	1	1-1	BK3
	Aug 27, 2014	8	8-8	BK1
	Sep 02, 2015	3	3-3	BK3
	Aug 28, 2017	3	3-3	BK2

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**Site 9**

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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 09, 2008	39	39-40	
	Sep 01, 2009	112	111-115	
	Aug 28, 2012	81	77-87	
	Aug 26, 2014	441	424-458	
	Sep 01, 2015	393	383-403	
	Aug 31, 2017	148	134-162	
Brook Trout >=200mm	Sep 09, 2008	4	4-4	BK3
	Sep 01, 2009	2	2-2	BK3

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Brook Trout >=200mm	Aug 28, 2012	3	3-3	BK3
	Aug 26, 2014	11	11-11	BK2
	Sep 01, 2015	17	17-18	BK3
	Aug 31, 2017	3	3-4	BK2

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**Site 11**


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Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Sep 01, 2009	68	68-69	
	Aug 26, 2014	279	265-293	
	Sep 01, 2015	364	362-368	
	Aug 30, 2017	146	146-148	
Brook Trout >=200mm	Sep 01, 2009	2	2-2	BK3
	Aug 26, 2014	6	6-7	BK2
	Sep 01, 2015	21	21-21	BK3
	Aug 30, 2017	7	7-7	BK2

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**Site 15**


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Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jul 16, 2008	2	2-2	

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Brook Trout <200mm	Sep 09, 2008	43	41-48	
	Jun 09, 2015	144	122-166	
	May 12, 2017	24	24-24	
Brook Trout >=200mm	Jul 16, 2008	5	5-5	BK2
	Sep 09, 2008	1	1-1	BK3
	Jun 09, 2015	3	3-3	BK2

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**Site 49**

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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 02, 2009	191	184-199	
	Aug 31, 2010	4	4-4	
	Aug 30, 2011	45	41-53	
	Aug 29, 2012	129	124-136	
	Aug 29, 2014	269	257-281	
	Aug 31, 2017	346	331-361	
Brook Trout >=200mm	Sep 02, 2009	8	8-8	BK3
	Aug 30, 2011	1	1-1	BK3

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Brook Trout >=200mm	Aug 29, 2014	9	9-11	BK1
	Aug 31, 2017	1	1-1	BK3

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**Site 72**

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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	Aug 25, 2011	138	135-143	
	Aug 22, 2012	117	114-122	
	Aug 21, 2014	170	167-175	
	Aug 27, 2015	146	145-148	
	Aug 25, 2017	219	218-222	
Brook Trout >=200mm	Aug 27, 2015	2	2-3	BK3

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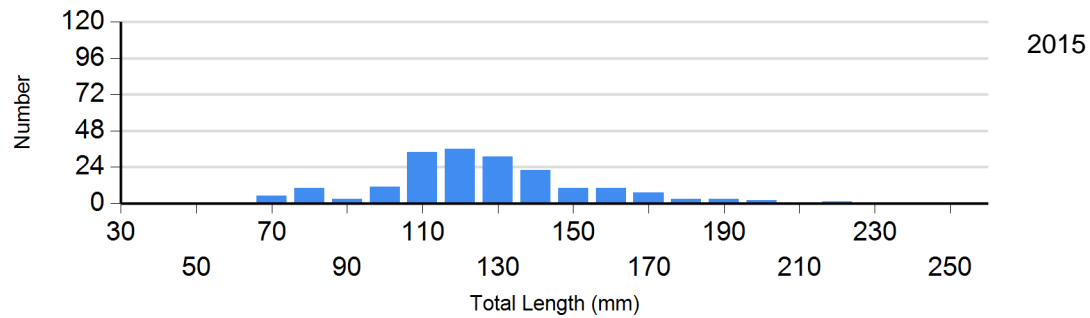
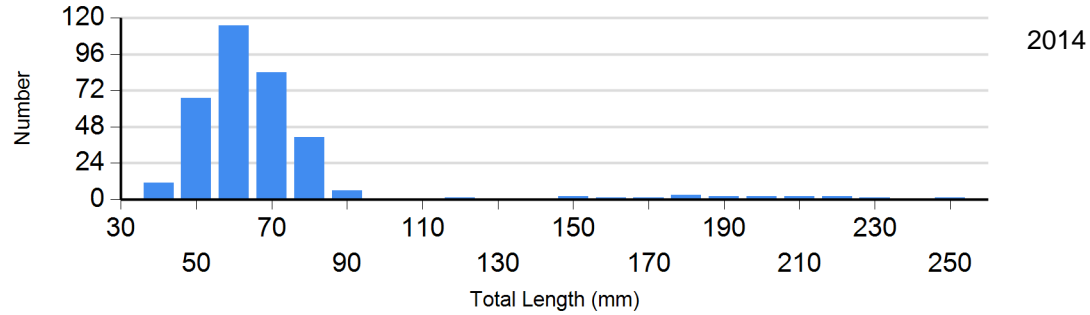
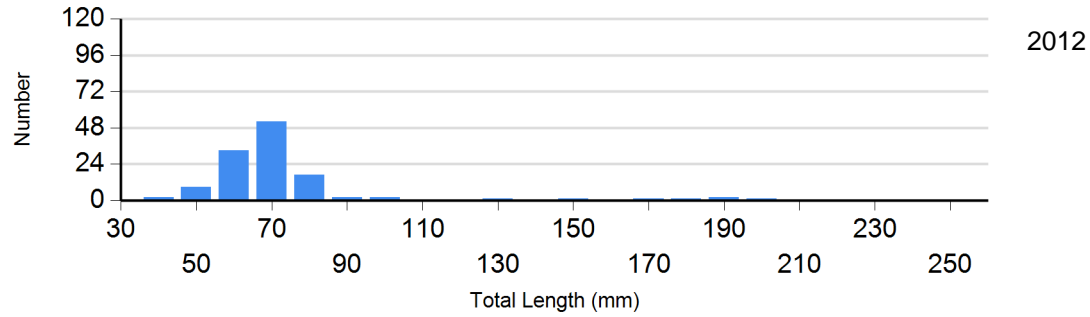


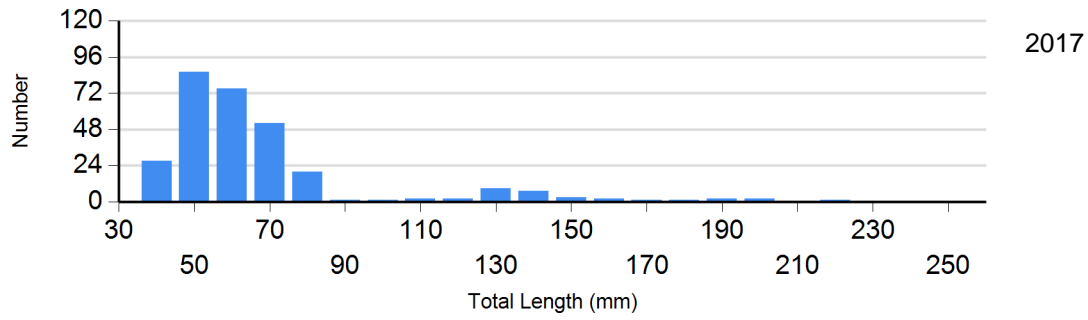
## Length Frequency Distribution

Length frequency histogram of species sampled by year.

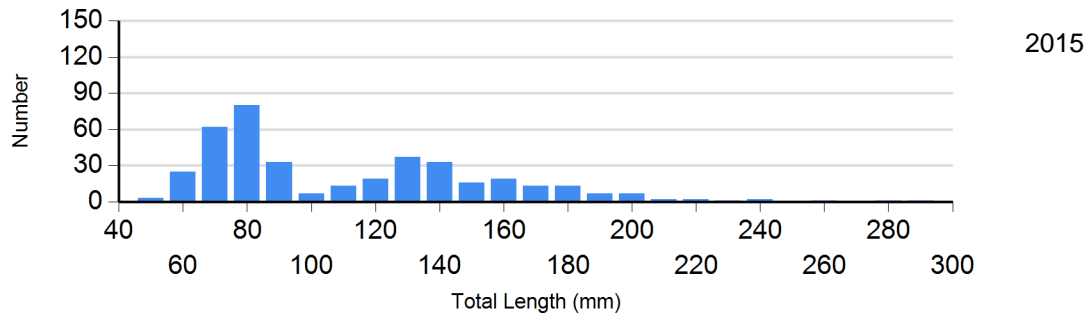
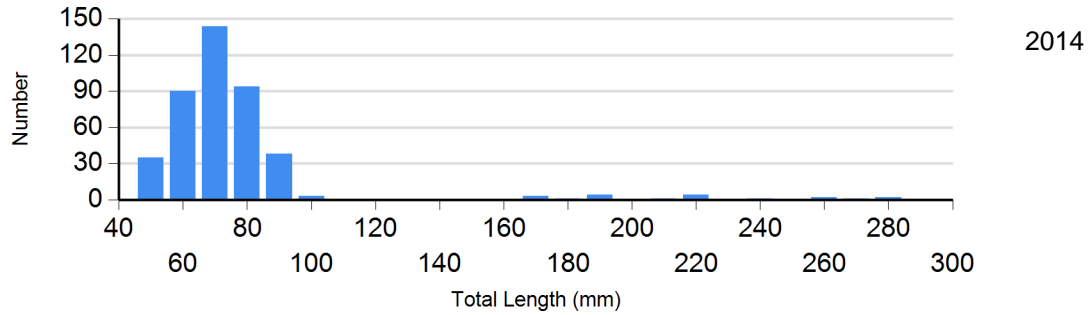
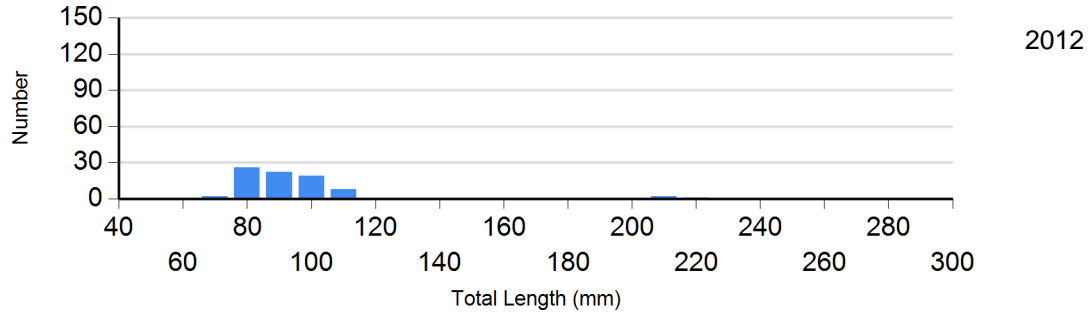
**Site:** 8

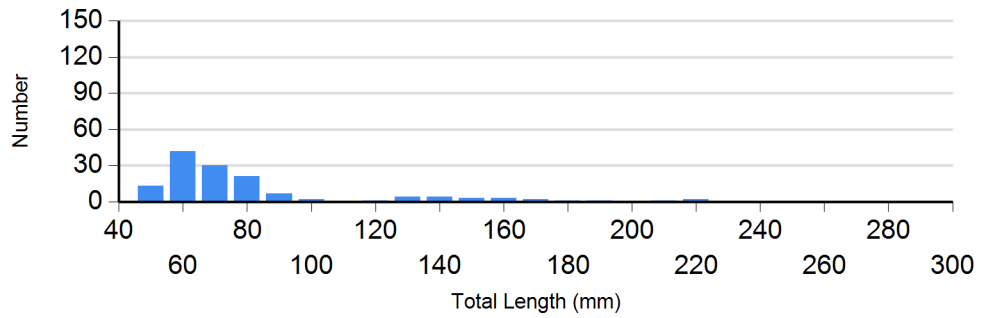
**Species:** Brook Trout



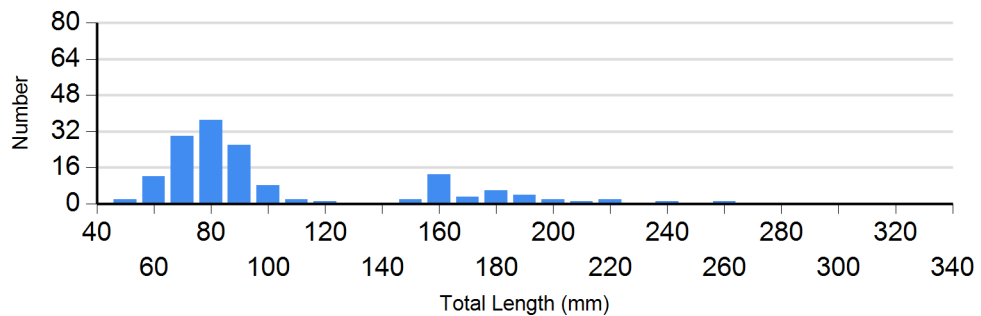
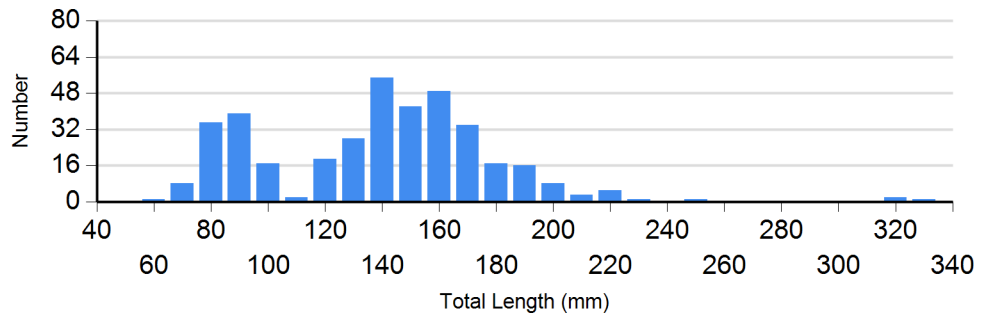
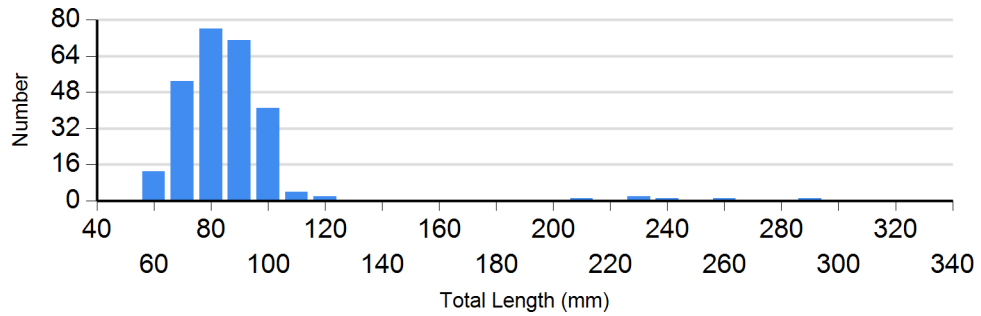


Site: 9  
Species: Brook Trout

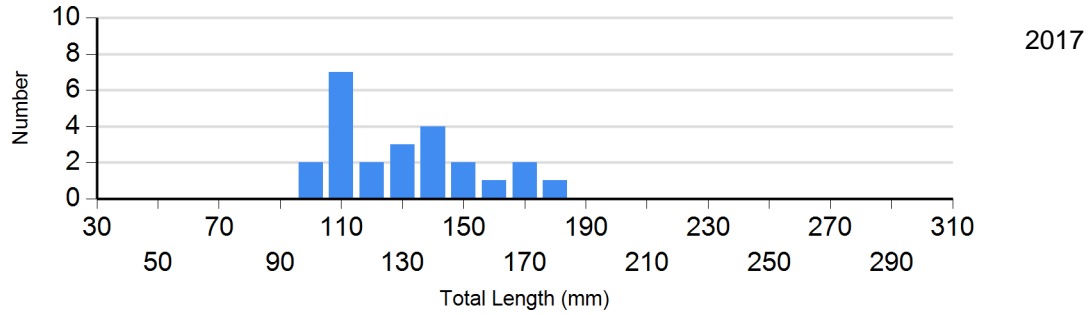
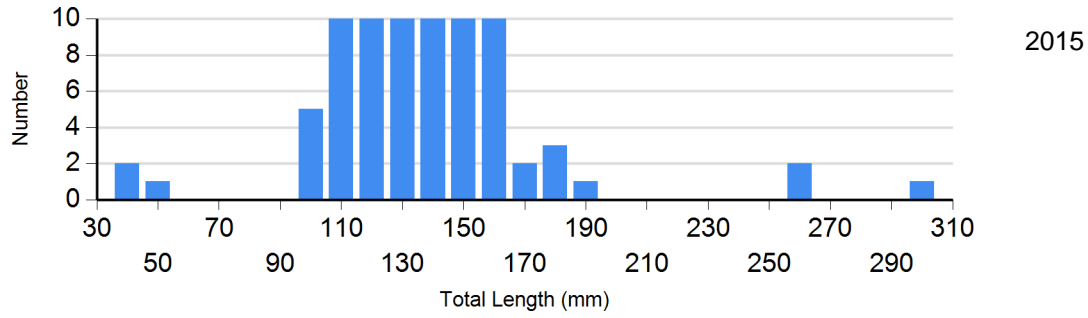




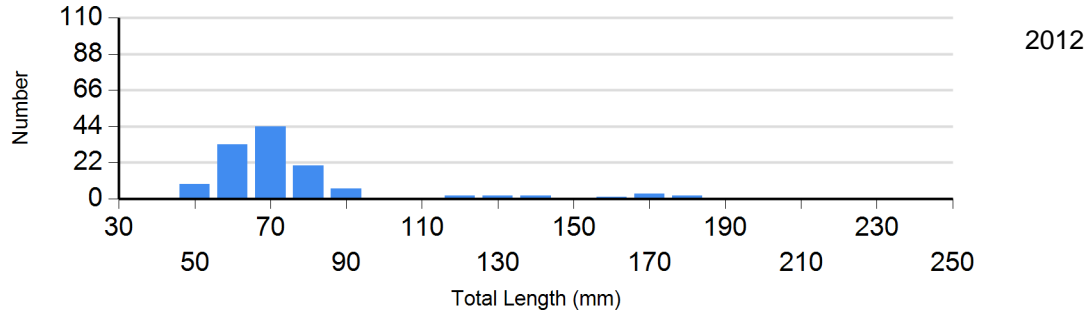
Site: 11  
Species: Brook Trout

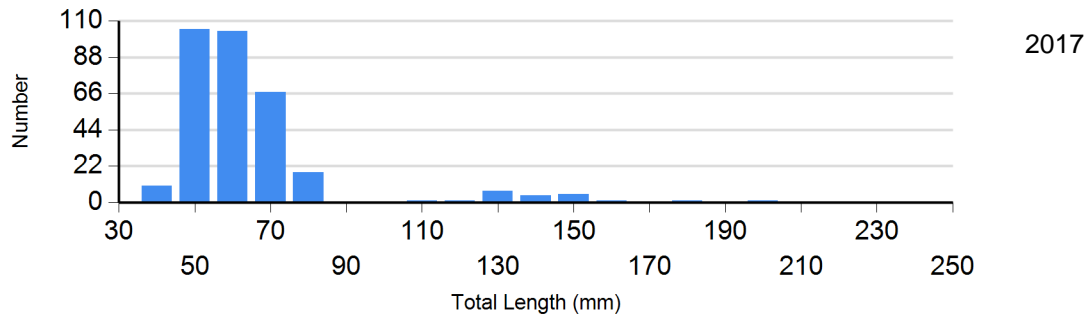
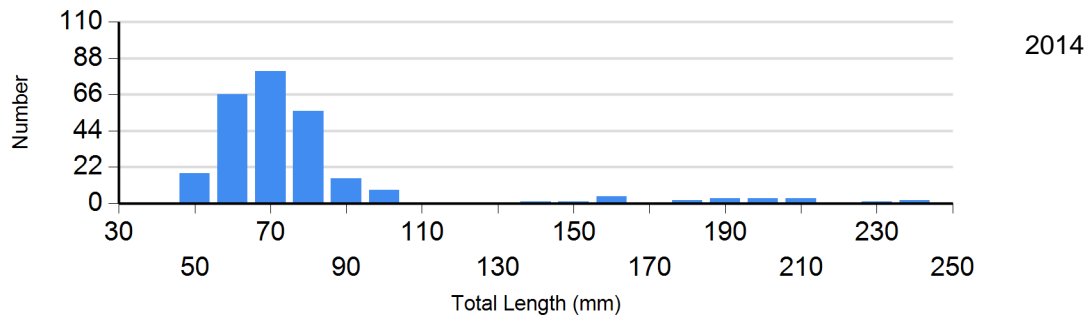


**Site: 15**  
**Species: Brook Trout**



**Site: 49**  
**Species: Brook Trout**





**Site: 72**  
**Species: Brook Trout**

