

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Deadwood Creek, Lawrence County
09-0060-00
2009

Table 1. Population and Biomass Estimates for Deadwood Creek

Site Number: 8
Site Midpoint (Latitude, Longitude): 44.37166357, -103.73844669
Survey Completed by: Chadwick Ecological Services
Stream Classification: BK3, BR0

Date Sampled: 09/01/2009
Site Length (m): 102
Mean Width (m): 0.0
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	103	109	117	103	0	0	1069	0	0.00	1719	93.8	15.0
Brook Trout	>=200mm	5	5	5	5	0	0	49	0	0.00	79	213.4	113.0
Brook Trout	All	108	114	122	108	0	0	1118	0	0.00	1798	99.4	19.6
Brown Trout	<200mm	3	5	24	3	0	0	49	0	0.00	79	117.0	23.0
Brown Trout	All	3	5	24	3	0	0	49	0	0.00	79	117.0	23.0

Site Number: 9
Site Midpoint (Latitude, Longitude): 44.37126918, -103.73941917
Survey Completed by: Chadwick Ecological Services
Stream Classification: BK3, BR3

Date Sampled: 09/01/2009
Site Length (m): 107
Mean Width (m): 0.0
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	111	112	115	111	0	0	1047	0	0.00	1684	77.1	6.1
Brook Trout	>=200mm	2	2	2	2	0	0	19	0	0.00	30	245.0	165.5
Brook Trout	All	113	114	117	113	0	0	1065	0	0.00	1714	80.1	8.9
Brown Trout	<200mm	174	177	181	174	0	0	1654	0	0.00	2662	87.5	8.2

Brown Trout	>=200mm	13	13	14	13	0	0	121	0	0.00	195	268.0	219.6
Brown Trout	All	187	190	194	187	0	0	1776	0	0.00	2857	100.1	22.9

Site Number: 11
Site Midpoint (Latitude, Longitude): 44.36995592, -103.74076877
Survey Completed by: Chadwick Ecological Services
Stream Classification: BK3, BR3

Date Sampled: 09/01/2009
Site Length (m): 109
Mean Width (m): 0.0
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	68	68	69	68	0	0	624	0	0.00	1004	95.4	10.6
Brook Trout	>=200mm	2	2	2	2	0	0	18	0	0.00	30	236.0	162.0
Brook Trout	All	70	70	71	70	0	0	642	0	0.00	1033	99.4	15.0
Brown Trout	<200mm	45	46	49	45	0	0	422	0	0.00	679	93.3	9.8
Brown Trout	>=200mm	12	12	12	12	0	0	110	0	0.00	177	295.8	327.3
Brown Trout	All	57	57	59	57	0	0	523	0	0.00	841	135.9	76.6

Site Number: 49
Site Midpoint (Latitude, Longitude): 44.36269958, -103.78234679
Survey Completed by: Chadwick Ecological Services
Stream Classification: BK3, BR0

Date Sampled: 09/02/2009
Site Length (m): 103
Mean Width (m): 0.0
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	184	191	199	184	0	0	1854	0	0.00	2984	88.8	12.0
Brook Trout	>=200mm	8	8	8	8	0	0	78	0	0.00	125	225.4	119.5
Brook Trout	All	192	199	207	192	0	0	1932	0	0.00	3109	94.5	16.5
Brown Trout	<200mm	137	148	159	137	0	0	1437	0	0.00	2312	82.3	6.9

Brown Trout	All	137	148	159	137	0	0	1437	0	0.00	2312	82.3	6.9
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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	
Class BR1	Number of wild Brown Trout exceeds 150 per acre
Class BR2	Number of wild Brook Trout ranges from 25 to 150 per acre
Class BR3	Number of wild Brown Trout is less than 25 per acre
Class BK1	Number of wild Brook Trout exceeds 150 per acre
Class BK2	Number of wild Brook Trout ranges from 25 to 150 per acre
Class BK3	Number of wild Brook Trout is less than 25 per acre
Class RB1	Number of wild Rainbow Trout exceeds 25 per acre
Class RB2	Number of wild Rainbow Trout is less than 25 per acre

Table 2. Species composition and population estimates on Deadwood Creek, 1999-2009

Site 8

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Aug 25, 2004	60	59-63	
	Aug 30, 2005	159	151-168	
	Aug 29, 2006	114	107-123	
	Sep 09, 2008	41	41-42	
	Sep 01, 2009	109	103-117	
Brook Trout >=200mm	Aug 25, 2004	2	2-2	BK2
	Aug 30, 2005	5	5-5	BK3

Brook Trout >=200mm	Aug 29, 2006	1	1-1	BK3
	Sep 09, 2008	5	5-5	BK3
	Sep 01, 2009	5	5-5	BK3
Brown Trout <200mm	Sep 09, 2008	14	14-16	
	Sep 01, 2009	5	3-24	

Site 9

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Aug 25, 2004	43	43-44	
	Aug 30, 2005	265	250-280	
	Aug 29, 2006	124	120-130	
	Sep 09, 2008	39	39-40	
	Sep 01, 2009	112	111-115	
Brook Trout >=200mm	Aug 25, 2004	1	1-1	BK3
	Aug 30, 2005	2	2-2	BK3
	Aug 29, 2006	1	1-1	BK3
	Sep 09, 2008	4	4-4	BK3

Brook Trout >=200mm	Sep 01, 2009	2	2-2	BK3
Brown Trout <200mm	Aug 25, 2004	1	1-1	
	Aug 30, 2005	55	55-57	
	Aug 29, 2006	60	59-63	
	Sep 09, 2008	32	32-34	
	Sep 01, 2009	177	174-181	
Brown Trout >=200mm	Sep 09, 2008	5	5-6	BR3
	Sep 01, 2009	13	13-14	BR3

Site 11

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Sep 01, 2009	68	68-69	
Brook Trout >=200mm	Sep 01, 2009	2	2-2	BK3
Brown Trout <200mm	Sep 01, 2009	46	45-49	
Brown Trout >=200mm	Sep 01, 2009	12	12-12	BR3

Site 49

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Oct 17, 2001	216	211-222	

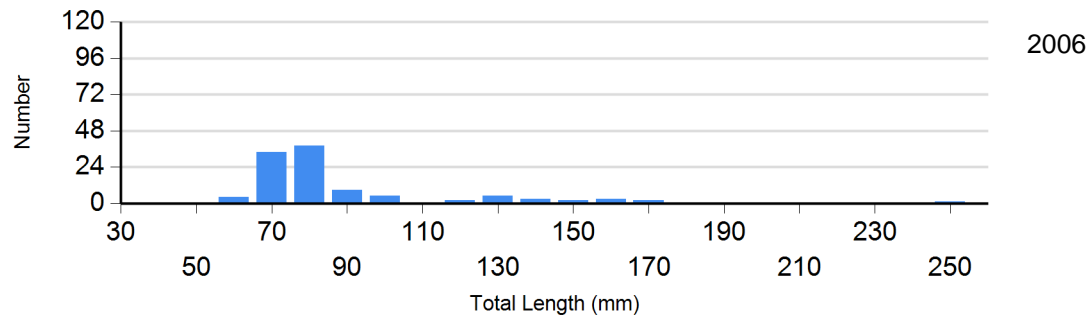
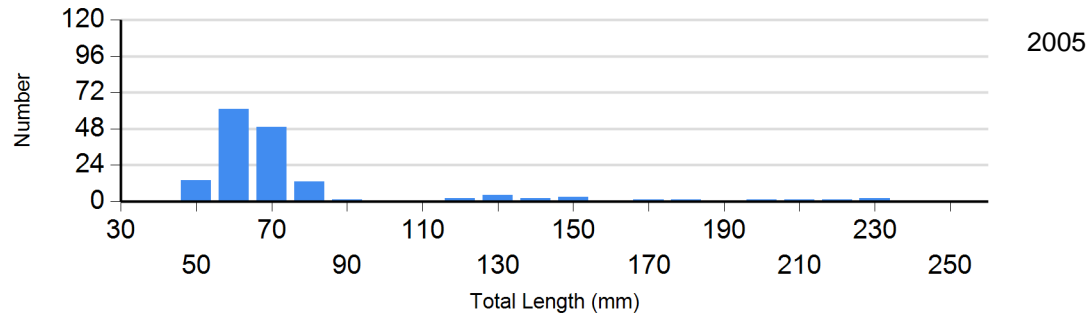
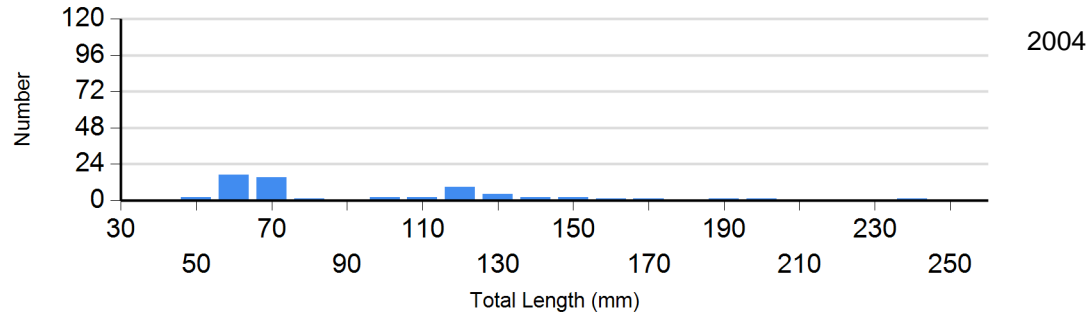
Brook Trout <200mm	Aug 25, 2004	89	86-94	
	Aug 29, 2005	68	66-72	
	Aug 29, 2006	43	42-46	
	Sep 02, 2009	191	184-199	
Brook Trout >=200mm	Aug 25, 2004	4	4-4	BK2
	Aug 29, 2005	3	3-3	BK3
	Aug 29, 2006	5	5-5	BK3
	Sep 02, 2009	8	8-8	BK3
Brown Trout <200mm	Sep 02, 2009	148	137-159	

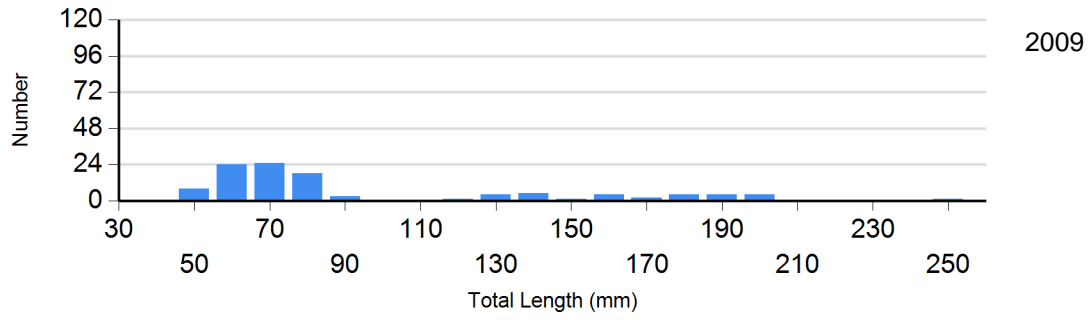
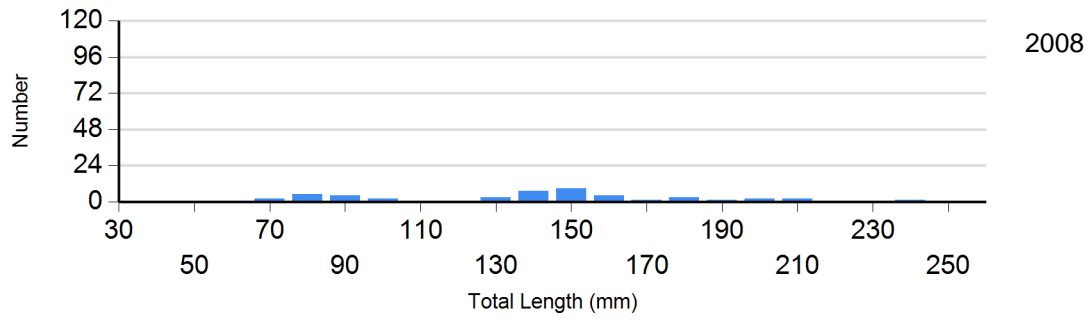
Length Frequency Distribution

Length frequency histogram of species sampled by year.

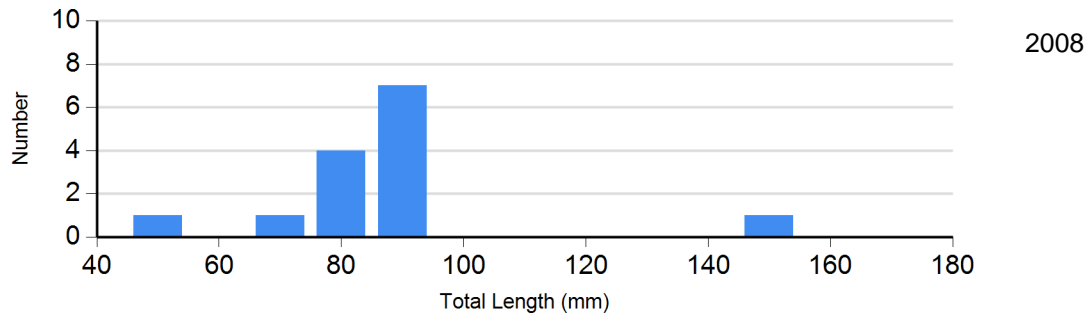
Site: 8

Species: Brook Trout

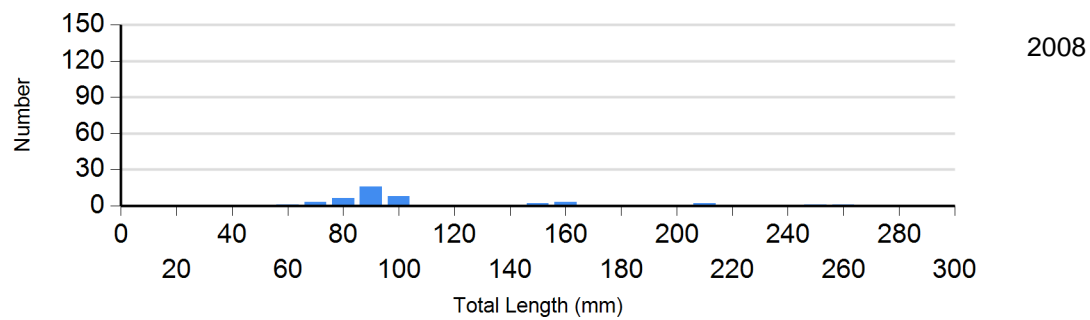
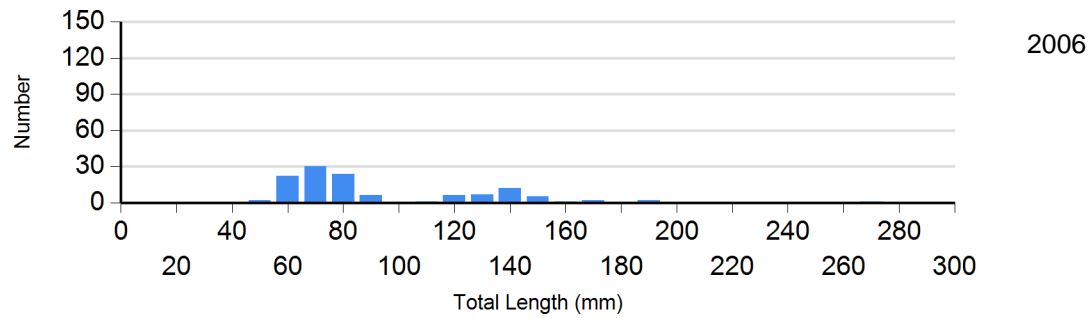
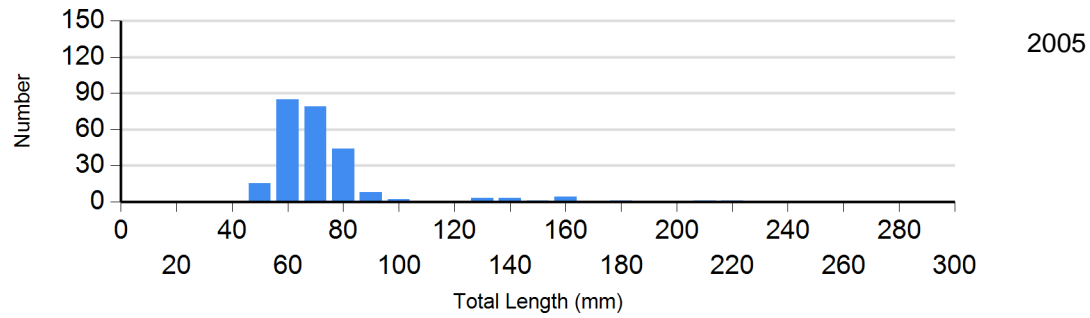
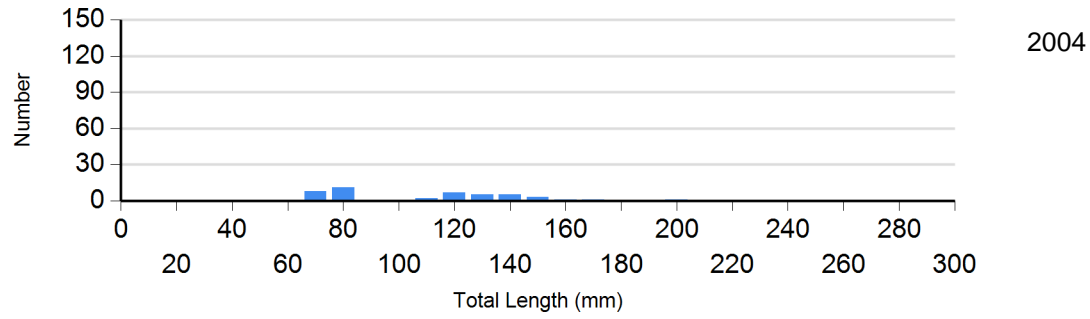


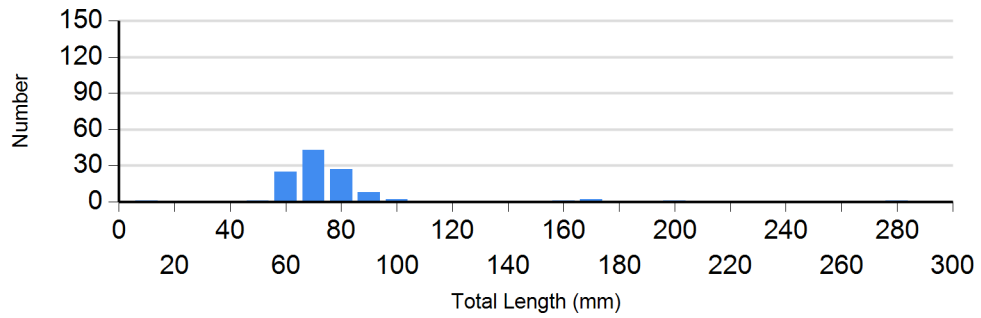


Site: 8
Species: Brown Trout

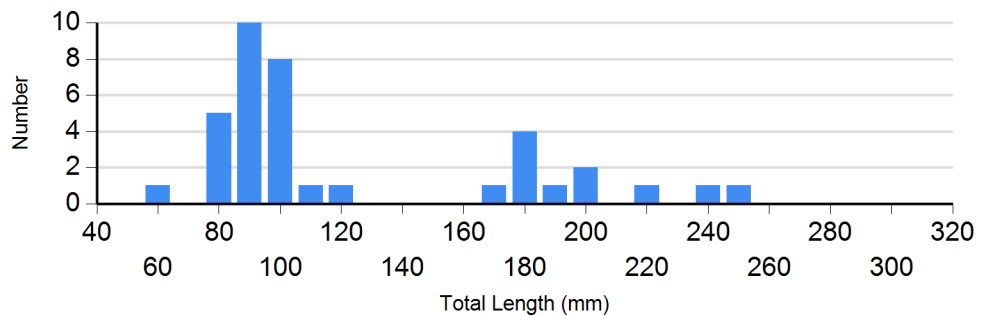
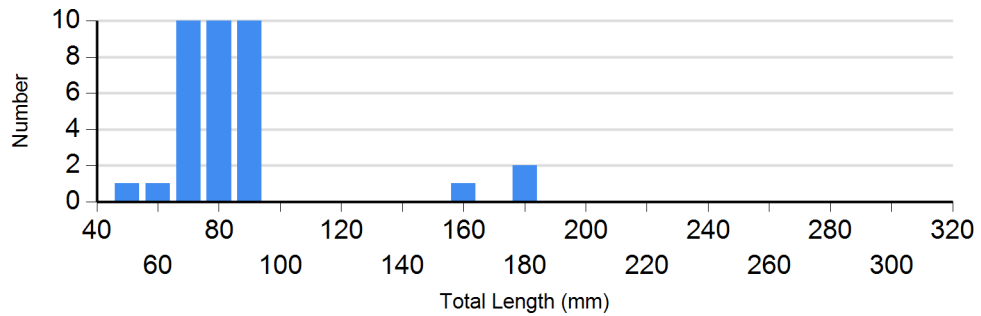
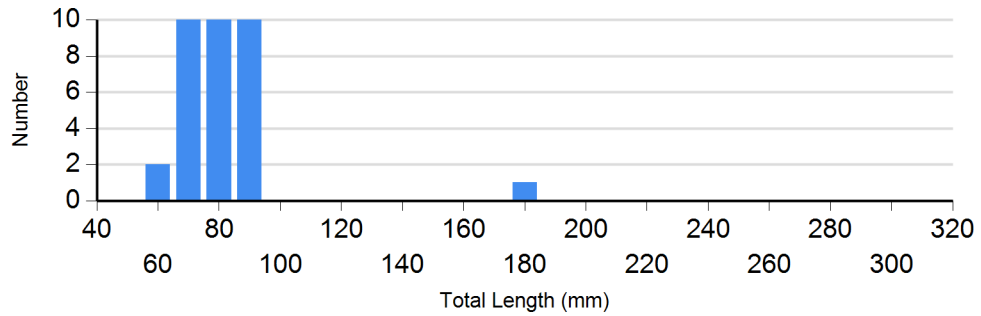


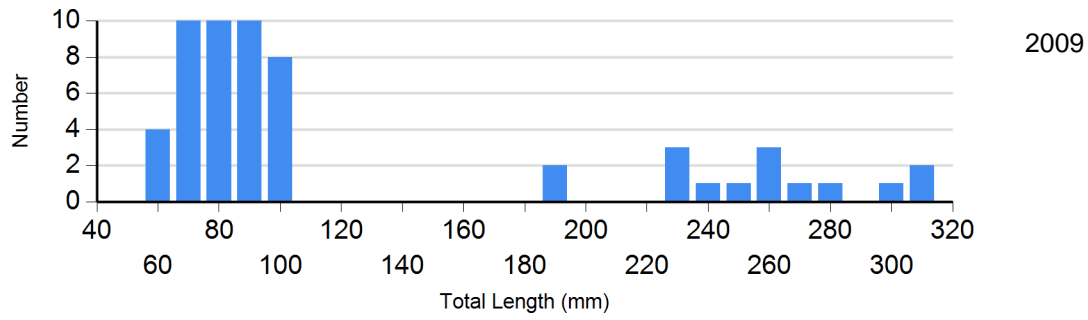
Site: 9
Species: Brook Trout



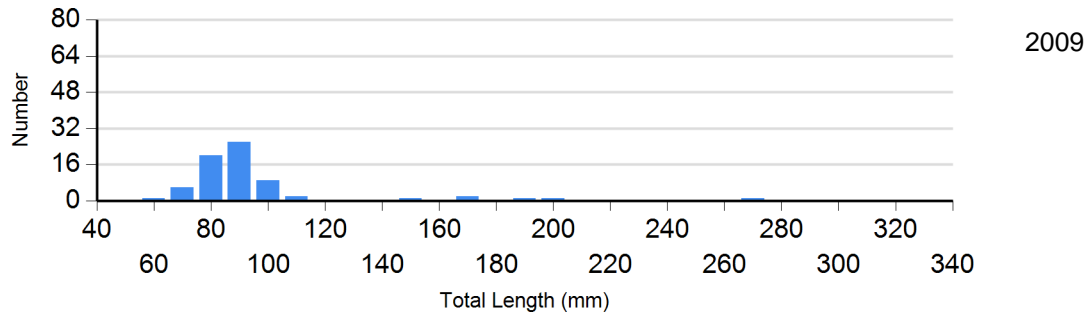


Site: 9
Species: Brown Trout

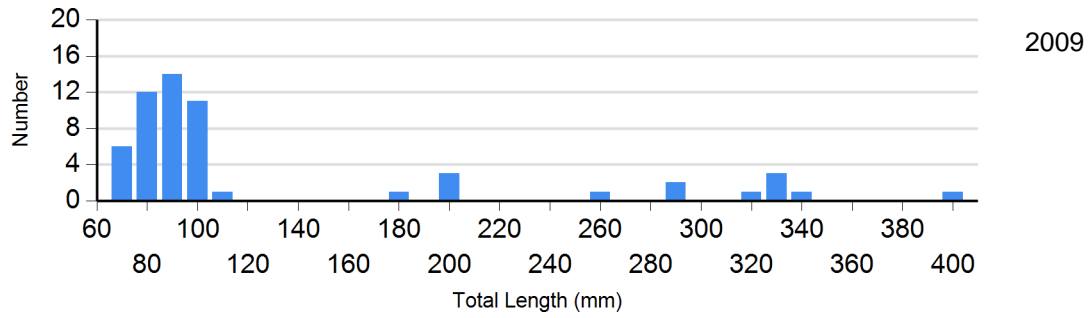




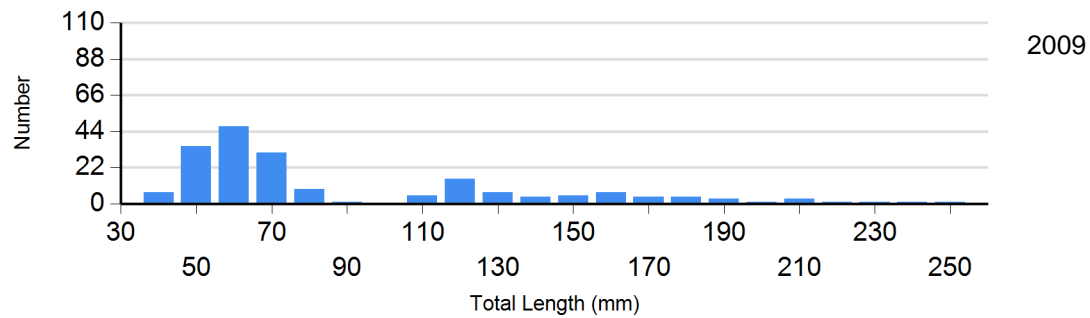
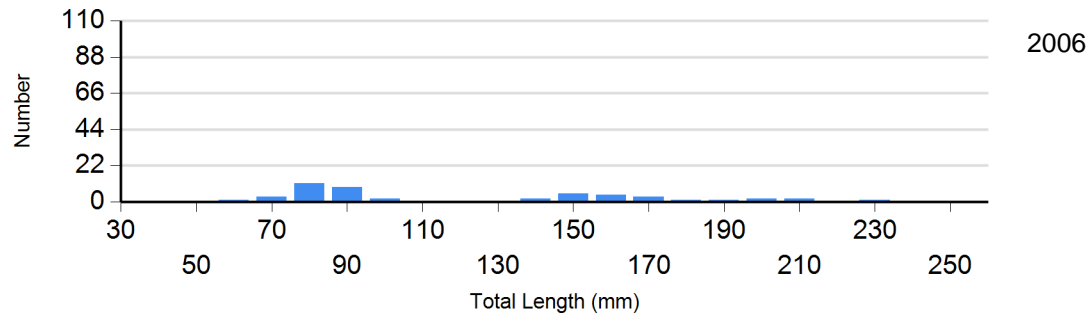
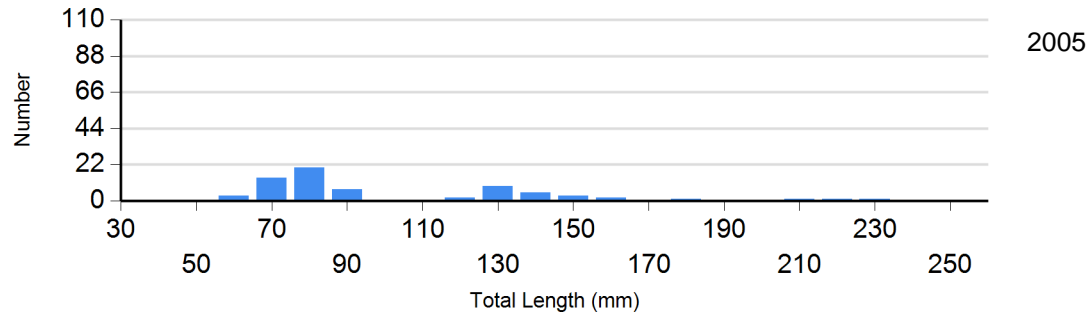
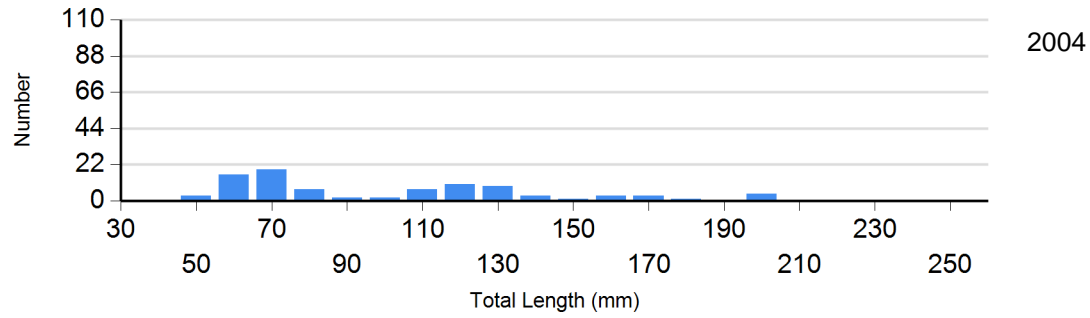
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Species: Brook Trout



Site: 11
Species: Brown Trout



Site: 49
Species: Brook Trout



Site: 49
Species: Brown Trout

