

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Annie Creek, Lawrence County
09-0074-00
2018

Table 1. Population and Biomass Estimates for Annie Creek

Site Number: 2
Site Midpoint (Latitude, Longitude): 44.32728433, -103.89361583
Survey Completed by: GEI
Stream Classification: BK2, BR0

Date Sampled: 08/22/2018
Site Length (m): 105
Mean Width (m): 3.2
Number of Pass: 3
Conductivity (umhos/cm):
pH:
Water Temperature (C):
Voltage: 240

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	53	57	51	1675	46	505	678	40.80	812	130.0	27.3
Brook Trout	>=200mm	2	2	2	2	63	6	19	26	5.16	31	202.0	91.5
Brook Trout	All	53	55	59	53	1739	52	524	704	46.10	843	132.7	29.7
Brown Trout	<200mm	17	17	18	17	537	31	162	218	27.43	261	176.5	57.2
Brown Trout	All	17	17	18	17	537	31	162	218	27.43	261	176.5	57.2

Site Number: 3
Site Midpoint (Latitude, Longitude): 44.32715455, -103.89244540
Survey Completed by: South Dakota Game, Fish and Parks
Stream Classification: BK0, BR3

Date Sampled: 05/22/2018
Site Length (m):
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	17	17	19	17	0	0	0	0	0.00	0	116.6	26.3
Brook Trout	All	17	17	19	17	0	0	0	0	0.00	0	116.6	26.3
Brown Trout	<200mm	9	9	10	9	0	0	0	0	0.00	0	137.0	31.0
Brown Trout	>=200mm	1	1	1	1	0	0	0	0	0.00	0	203.0	93.0
Brown Trout	All	10	10	11	10	0	0	0	0	0.00	0	143.6	37.2

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 Annie Creek, 2008-2018

Site 2

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Aug 27, 2008	114	113-117	
	Aug 26, 2009	125	115-136	
	Aug 24, 2010	130	129-133	
	Aug 24, 2011	113	109-119	
	Aug 24, 2012	162	142-182	
	May 28, 2014	25	25-26	
	Aug 22, 2014	136	129-144	

Brook Trout <200mm	Aug 26, 2015	96	95-99	
	Aug 26, 2015	95	95-97	
	Jun 03, 2016	41	41-43	
	Aug 23, 2017	97	96-100	
	Aug 22, 2018	53	51-57	
Brook Trout >=200mm	Aug 27, 2008	1	1-1	BK3
	Aug 26, 2009	2	2-2	BK3
	Aug 24, 2011	3	3-3	BK2
	Aug 24, 2012	3	3-4	BK2
	May 28, 2014	1	1-1	BK3
	Aug 22, 2014	5	5-5	BK2
	Aug 26, 2015	9	9-9	BK3
	Aug 26, 2015	9	9-9	BK3
	Jun 03, 2016	1	1-1	BK3
	Aug 23, 2017	1	1-1	BK3
	Aug 22, 2018	2	2-2	BK2

Brown Trout <200mm	Aug 27, 2008	14	15-19	
	Aug 26, 2009	3	3-3	
	Aug 24, 2010	6	6-6	
	Aug 24, 2011	7	7-7	
	Aug 24, 2012	29	29-30	
	May 28, 2014	15	15-17	
	Aug 22, 2014	35	35-36	
	Aug 26, 2015	20	20-20	
	Aug 26, 2015	20	20-20	
	Jun 03, 2016	1	1-1	
	Aug 23, 2017	28	27-32	
	Aug 22, 2018	17	17-18	
Brown Trout >=200mm	Aug 27, 2008	1	1-1	BR3
	Aug 26, 2009	3	3-3	BR3
	Aug 24, 2010	2	2-2	BR2
	Aug 24, 2011	4	4-4	BR2

Brown Trout >=200mm	Aug 24, 2012	2	2-3	BR2
	Aug 22, 2014	1	1-1	BR3
	Aug 26, 2015	19	19-19	BR3
	Aug 26, 2015	19	19-19	BR3
	Jun 03, 2016	1	1-1	BR3
	Aug 23, 2017	9	9-11	BR2

Site 3

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Aug 24, 2010	130	127-135	
	Jun 09, 2014	26	26-28	
	May 22, 2018	17	17-19	
Brook Trout >=200mm	Aug 24, 2010	1	1-1	BK3
	Jun 09, 2014	1	1-1	BK3
Brown Trout <200mm	Aug 24, 2010	8	8-9	
	Jun 09, 2014	17	17-18	
	May 22, 2018	9	9-10	

Brown Trout >=200mm

Aug 24, 2010

1

1-1

BR3

May 22, 2018

1

1-1

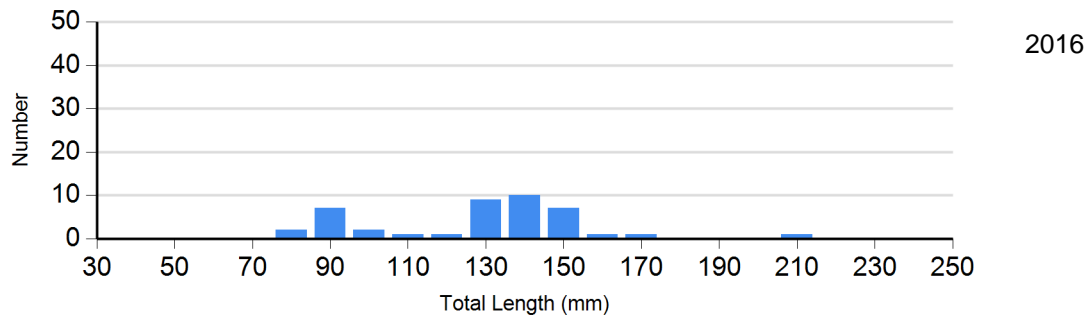
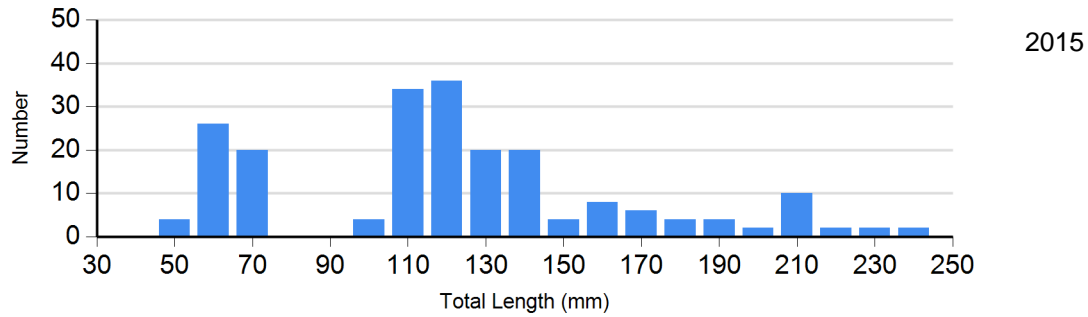
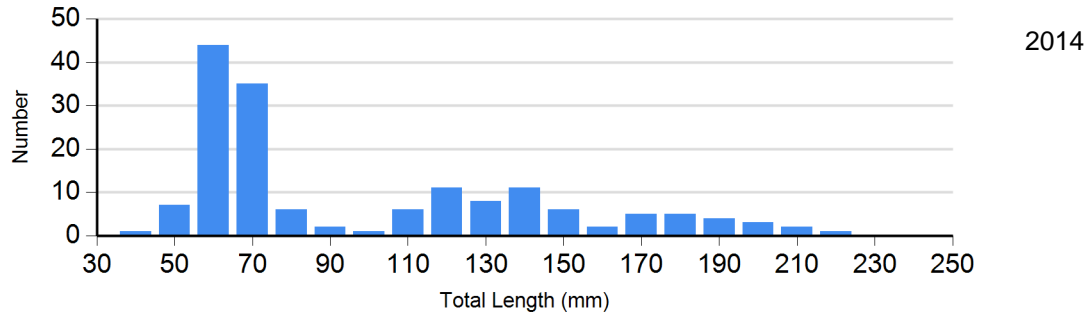
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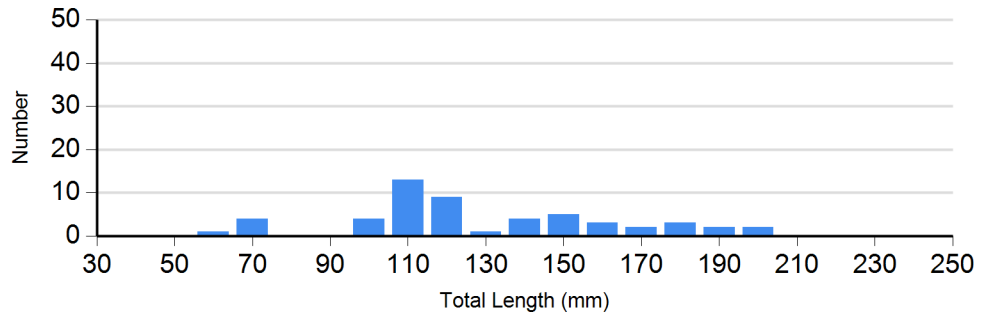
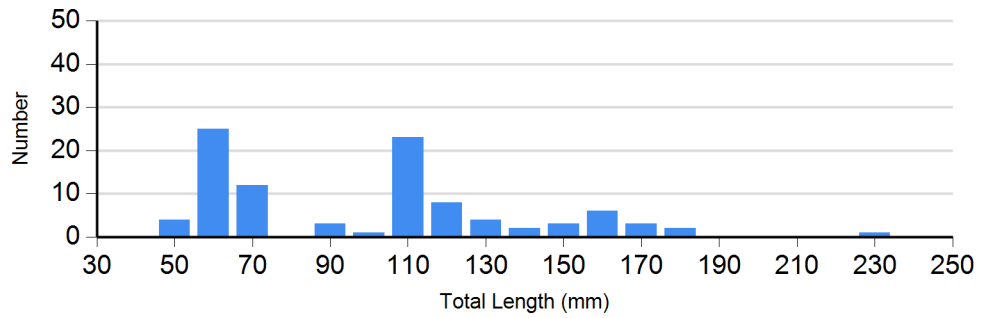
Length Frequency Distribution

Length frequency histogram of species sampled by year.

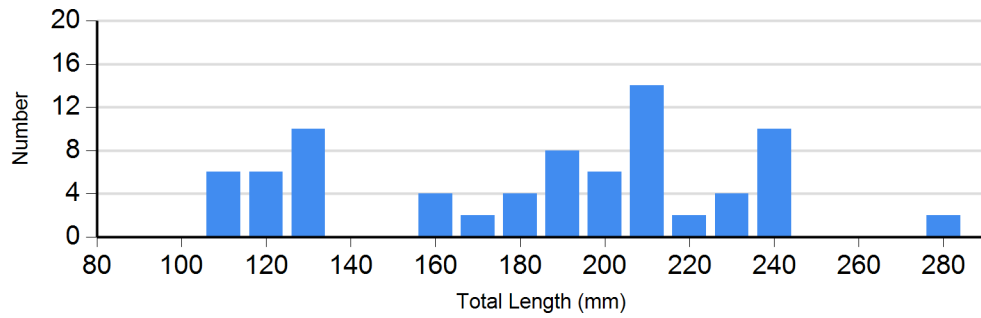
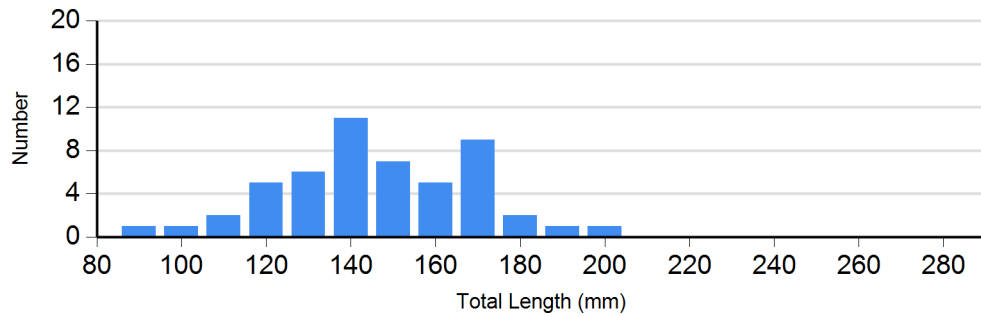
Site: 2

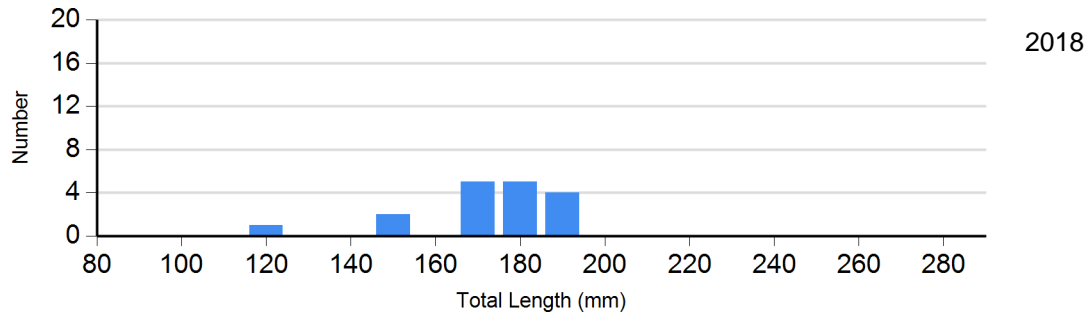
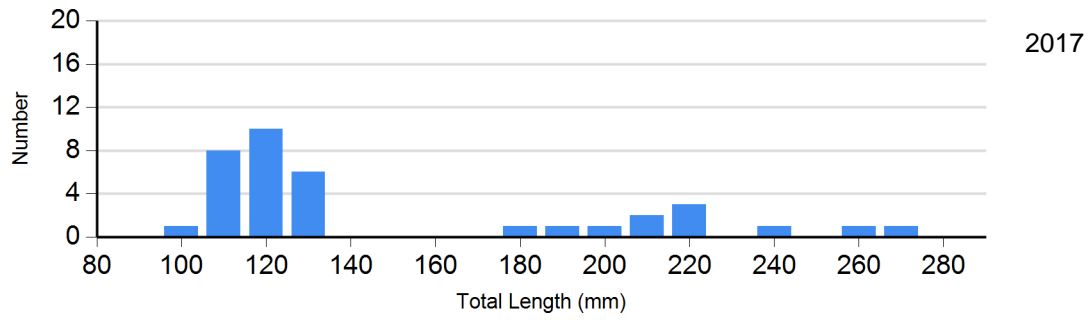
Species: Brook Trout



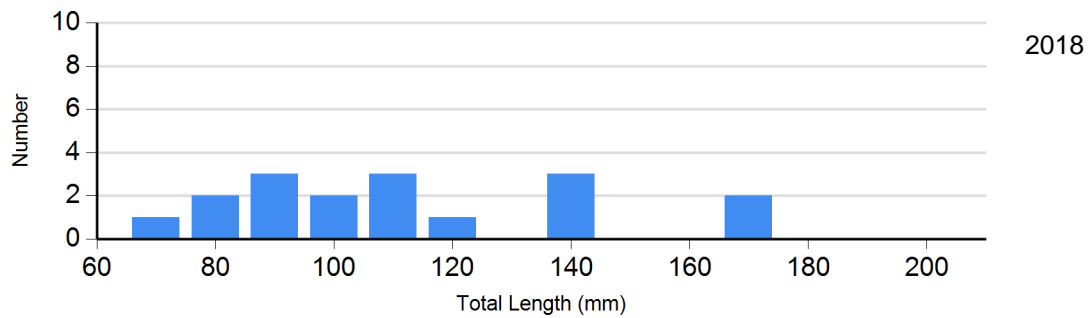
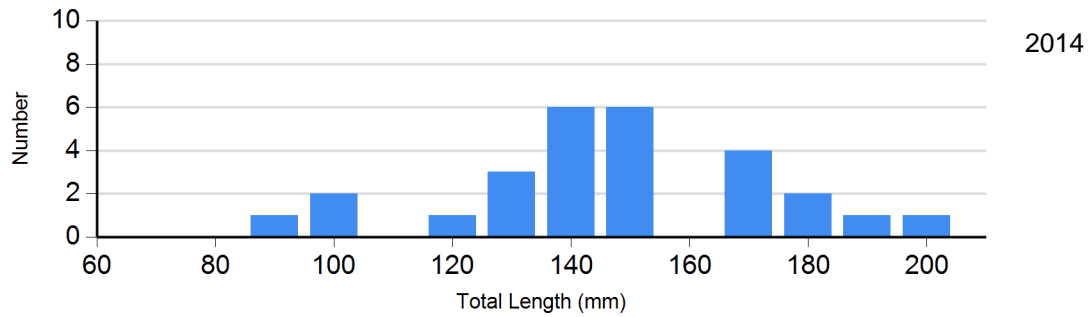


Site: 2
Species: Brown Trout





Site: 3
Species: Brook Trout



Site: 3
Species: Brown Trout

