

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Gold Run Gulch (Castle Creek Trib), Pennington County
02-0096-00
2014

Table 1. Population and Biomass Estimates for Gold Run Gulch (Castle Creek Trib)

Site Number: 15	Date Sampled: 06/17/2014	Conductivity (umhos/cm): 217
Site Midpoint (Latitude, Longitude): 44.00695226, -103.79042990	Site Length (m): 100	pH: 7.8
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 1.4	Water Temperature (C): 13.0
Stream Classification: BK2, RB1	Number of Pass: 3	Voltage: 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	24	24	25	24	1703	59	240	690	52.72	386	136.5	34.7
Brook Trout	>=200mm	2	2	3	2	142	18	20	57	16.28	32	224.0	128.5
Brook Trout	All	26	26	28	26	1845	79	260	747	70.56	418	143.2	42.8
Hatchery Rainbow Trout	>=200mm	14	14	14	14	994	268	140	402	239.58	225	317.6	270.1
Hatchery Rainbow Trout	All	14	14	14	14	994	268	140	402	239.58	225	317.6	270.1
Rainbow Trout	<200mm	13	13	13	13	923	27	130	374	24.44	209	112.5	29.7
Rainbow Trout	>=200mm	1	1	1	1	71	14	10	29	12.55	16	270.0	198.0
Rainbow Trout	All	14	14	14	14	994	46	140	402	41.25	225	123.8	46.5
Rock Bass	All	36	36	37	36	2555	67	360	1035	60.25	579	112.0	26.4

Site Number: 38	Date Sampled: 06/26/2014	Conductivity (umhos/cm): 219
Site Midpoint (Latitude, Longitude): 43.99782857, -103.78386835	Site Length (m): 100	pH: 7.8
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 1.2	Water Temperature (C): 10.5
Stream Classification: BK2	Number of Pass: 2	Voltage: 325

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	2	2	2	2	167	9	20	68	7.96	32	157.5	53.5
Brook Trout	>=200mm	1	1	1	1	83	22	10	34	19.20	16	260.0	258.0
Brook Trout	All	3	3	3	3	250	30	30	101	27.16	48	191.7	121.7

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	
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 Gold Run Gulch (Castle Creek Trib), 2004-2014

Site 15

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	May 29, 2008	1	1-1	
	Jun 17, 2014	24	24-25	
Brook Trout >=200mm	Jun 17, 2014	2	2-3	BK2
Hatchery Rainbow Trout >=200mm	Jun 17, 2014	14	14-14	
Rainbow Trout <200mm	Jun 17, 2014	13	13-13	
Rainbow Trout >=200mm	Jun 17, 2014	1	1-1	RB1
Rock Bass	Jun 17, 2014	36	36-37	

Site 38

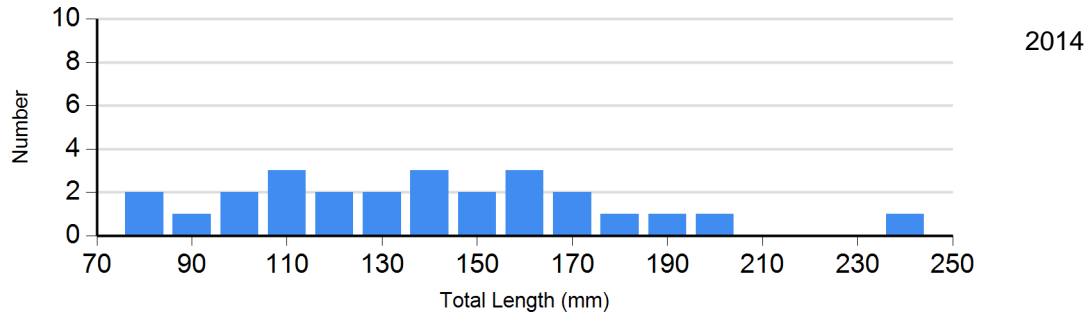
Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jun 26, 2014	2	2-2	
Brook Trout >=200mm	Jun 26, 2014	1	1-1	BK2

Length Frequency Distribution

Length frequency histogram of species sampled by year.

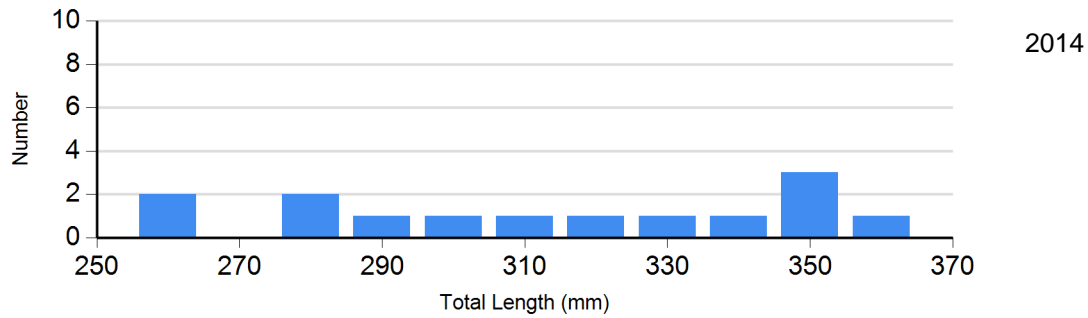
Site: 15

Species: Brook Trout



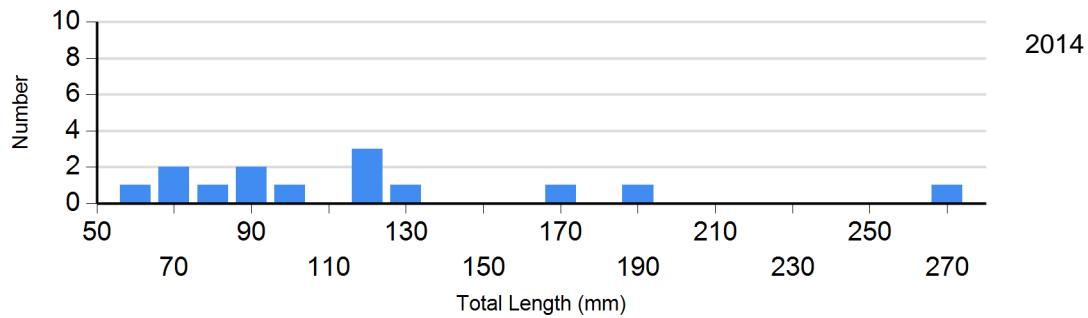
Site: 15

Species: Hatchery Rainbow Trout

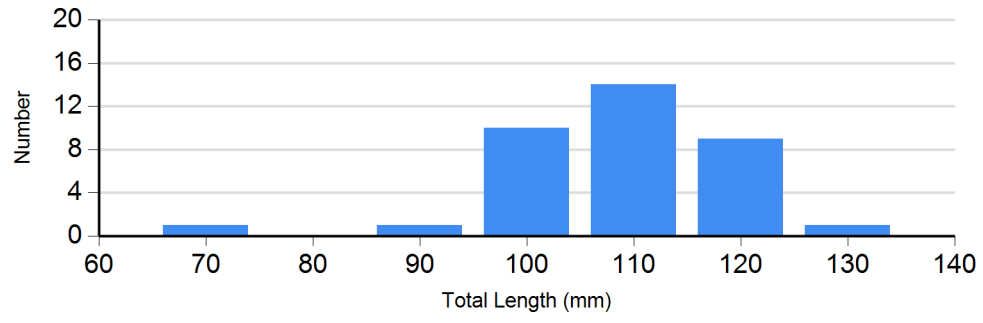


Site: 15

Species: Rainbow Trout



Site: 15
Species: Rock Bass



2014