

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Crow Creek (Trib. of Redwater), Lawrence County
09-0037-00
2008

Table 1. Population and Biomass Estimates for Crow Creek (Trib. of Redwater)

Site Number: 31	Date Sampled: 07/28/2008	Conductivity (umhos/cm): 1276
Site Midpoint (Latitude, Longitude): 44.56201742, -104.00884914	Site Length (m): 100	pH: 8.2
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 5.8	Water Temperature (C): 19.2
Stream Classification: BR2, RB1	Number of Pass: 1	Voltage: 0

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)
Brown Trout	<200mm	5	5	5	5	86	2	50	35	1.83	80	110.4	23.8
Brown Trout	>=200mm	18	18	18	18	311	159	180	126	141.66	290	358.4	509.6
Brown Trout	All	65	65	65	65	1124	474	650	455	422.87	1046	304.5	421.3
Mountain Sucker	All	1	1	1	1	17	1	10	7	0.45	16	137.0	29.0
Rainbow Trout	<200mm	1	1	1	1	17	0	10	7	0.20	16	112.0	13.0
Rainbow Trout	>=200mm	4	4	4	4	69	49	40	28	44.17	64	406.0	715.0
Rainbow Trout	All	5	5	5	5	86	50	50	35	44.37	80	347.2	574.6

Site Number: 34	Date Sampled: 07/28/2008	Conductivity (umhos/cm): 1237
Site Midpoint (Latitude, Longitude): 44.56088009, -104.01045755	Site Length (m): 100	pH: 8.2
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 5.0	Water Temperature (C): 21.8
Stream Classification: BR2, RB1	Number of Pass: 1	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)
Brown Trout	<200mm	15	15	15	15	302	13	150	122	11.81	241	122.4	43.8

Brown Trout	>=200mm	14	14	14	14	282	56	140	114	49.90	225	265.5	198.1
Brown Trout	All	45	45	45	45	907	125	450	367	111.50	724	191.5	137.7
Longnose Sucker	All	3	3	3	3	60	26	30	24	23.13	48	354.7	428.7
Rainbow Trout	>=200mm	9	9	9	9	181	178	90	73	158.82	145	417.7	981.0
Rainbow Trout	All	9	9	9	9	181	178	90	73	158.82	145	417.7	981.0

Site Number: 148

Site Midpoint (Latitude, Longitude): 44.50284026, -104.00045902

Survey Completed by: South Dakota Game, Fish and Parks

Stream Classification: BK0

Date Sampled: 07/29/2008

Site Length (m): 100

Mean Width (m): 1.8

Number of Pass: 1

Conductivity (umhos/cm): 462

pH: 8.1

Water Temperature (C): 19.4

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	1	1	1	1	56	3	10	23	2.69	16	165.0	54.0
Brook Trout	All	1	1	1	1	56	3	10	23	2.69	16	165.0	54.0

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 Crow Creek (Trib. of Redwater), 1998-2008

Site 31

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brown Trout <200mm	Aug 17, 1998	115	93-140	
	Jun 26, 2000	88	61-128	
	Aug 21, 2006	188	173-203	
	Jul 28, 2008	5	5-5	
Brown Trout >=200mm	Aug 17, 1998	62	60-66	BR1
	Jun 26, 2000	91	81-104	BR1
	Aug 21, 2006	50	50-51	BR1

Brown Trout >=200mm	Jul 28, 2008	18	18-18	BR2
Green Sunfish	Aug 17, 1998	2	3-4	
	Jun 26, 2000	1	1-1	
Longnose Dace	Aug 17, 1998	5	5-5	
	Jun 26, 2000	8	6-19	
Longnose Sucker	Aug 17, 1998	9	9-9	
	Jun 26, 2000	7	7-8	
	Aug 21, 2006	3	3-4	
Mountain Sucker	Jul 28, 2008	1	1-1	
Rainbow Trout <200mm	Jun 26, 2000	1	1-5	
	Aug 21, 2006	16	16-17	
	Jul 28, 2008	1	1-1	
Rainbow Trout >=200mm	Jun 26, 2000	4	4-4	RB1
	Aug 21, 2006	1	1-2	RB2
	Jul 28, 2008	4	4-4	RB1
White Sucker	Aug 17, 1998	16	16-17	

White Sucker	Jun 26, 2000	7	7-8
	Aug 21, 2006	6	6-6

Site 34

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brown Trout <200mm	Jul 28, 2008	15	15-15	
Brown Trout >=200mm	Jul 28, 2008	14	14-14	BR2
Longnose Sucker	Jul 28, 2008	3	3-3	
Rainbow Trout >=200mm	Jul 28, 2008	9	9-9	RB1

Site 148

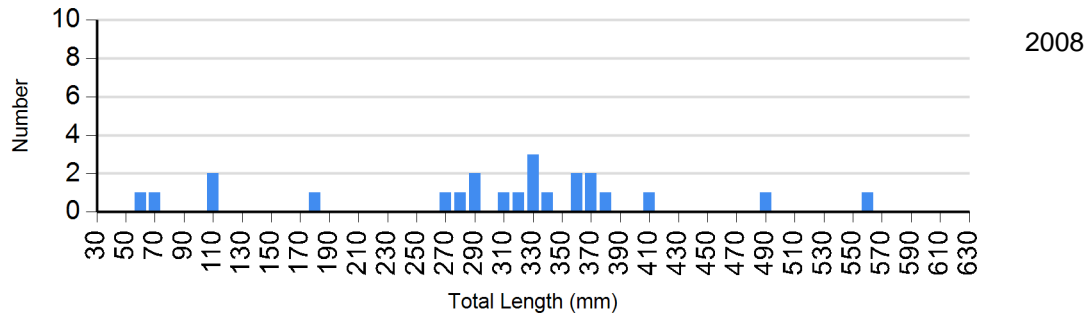
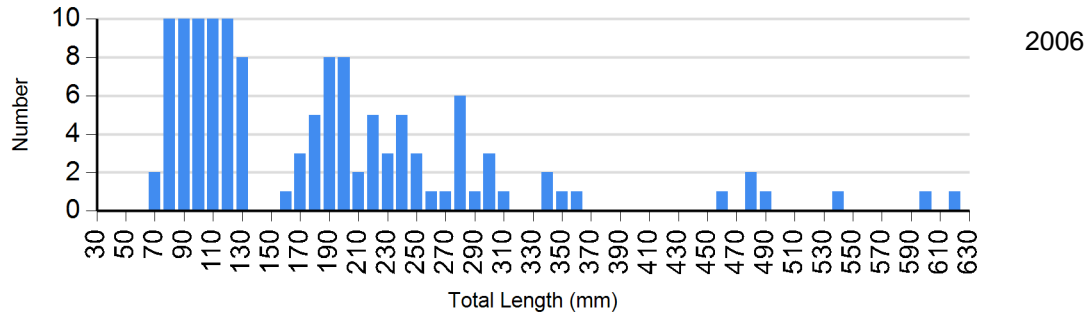
Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jul 29, 2008	1	1-1	

Length Frequency Distribution

Length frequency histogram of species sampled by year.

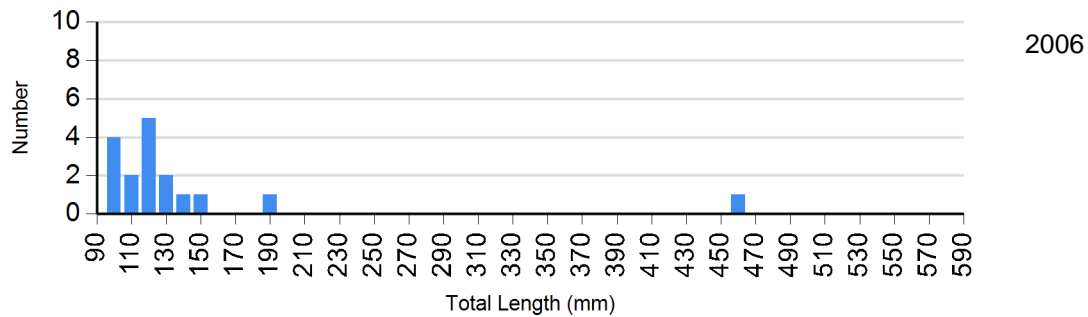
Site: 31

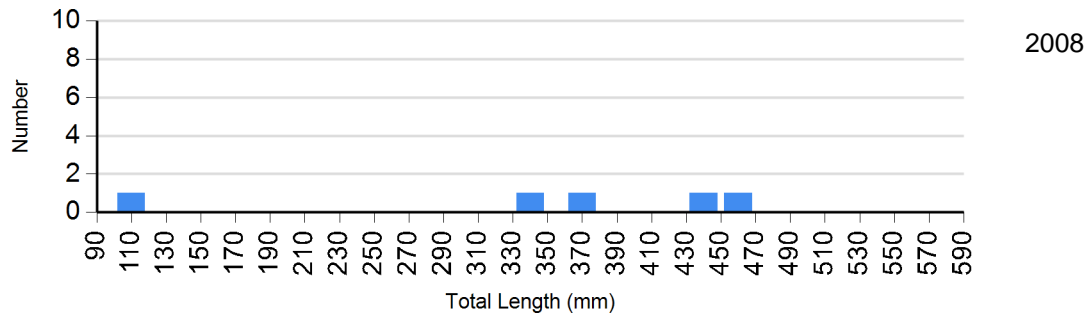
Species: Brown Trout



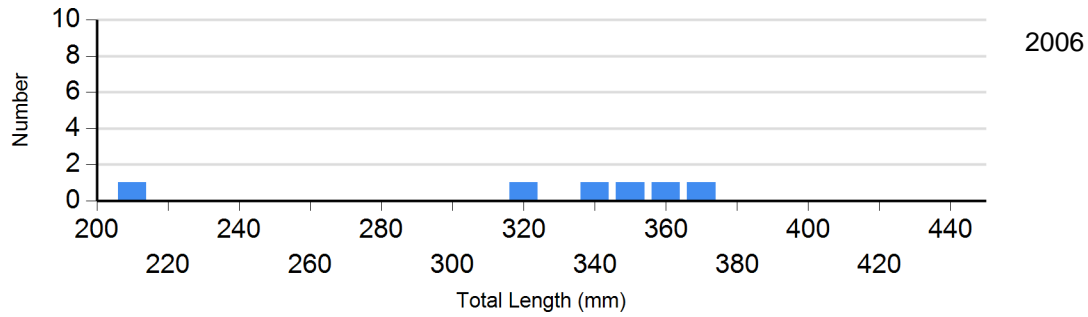
Site: 31

Species: Rainbow Trout

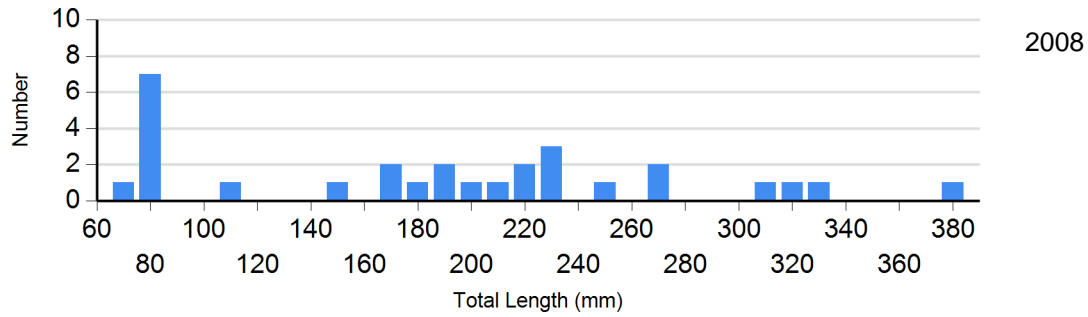




Site: 31
Species: White Sucker



Site: 34
Species: Brown Trout



Site: 34
Species: Rainbow Trout

