

**SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY**  
**Crow Creek (Trib. of Redwater), Lawrence County**  
**09-0037-00**  
**2006**

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

<b>Site Number:</b> 31	<b>Date Sampled:</b> 08/21/2006	<b>Conductivity (umhos/cm):</b> 800
<b>Site Midpoint (Latitude, Longitude):</b> 44.56201742, -104.00884914	<b>Site Length (m):</b> 100	<b>pH:</b>
<b>Survey Completed by:</b> South Dakota Game, Fish and Parks	<b>Mean Width (m):</b> 5.4	<b>Water Temperature (C):</b> 15.0
<b>Stream Classification:</b> BR1, RB2	<b>Number of Pass:</b> 3	<b>Voltage:</b> 350

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	171	188	203	173	3481	65	1880	1410	57.75	3025	111.9	18.6
Brown Trout	>=200mm	50	50	51	50	926	348	500	375	310.90	805	294.4	376.1
Brown Trout	All	221	234	245	223	4333	420	2340	1755	375.04	3765	153.2	96.9
Longnose Sucker	All	3	3	4	3	56	15	30	23	13.52	48	296.0	272.5
Rainbow Trout	<200mm	16	16	17	16	296	7	160	120	6.53	257	127.3	24.7
Rainbow Trout	>=200mm	1	1	2	1	19	19	10	8	17.20	16	464.0	1040.0
Rainbow Trout	All	17	17	18	17	315	27	170	128	23.73	274	147.1	84.4
White Sucker	All	6	6	6	6	111	49	60	45	43.78	97	330.2	441.3

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<b>Site Number:</b> 35	<b>Date Sampled:</b> 09/14/2006	<b>Conductivity (umhos/cm):</b> 1050
<b>Site Midpoint (Latitude, Longitude):</b> 44.56066453, -104.01129520	<b>Site Length (m):</b> 100	<b>pH:</b> 7.0
<b>Survey Completed by:</b> South Dakota Game, Fish and Parks	<b>Mean Width (m):</b> 6.0	<b>Water Temperature (C):</b> 16.0
<b>Stream Classification:</b> BR1, RB0	<b>Number of Pass:</b> 3	<b>Voltage:</b>

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	174	174	176	174	2918	59	1740	1182	52.58	2800	116.3	20.2
Brown Trout	>=200mm	27	27	27	27	453	65	270	183	58.40	434	247.0	144.5
Brown Trout	All	298	300	304	298	5030	183	3000	2037	163.22	4827	133.9	36.3
Green Sunfish	All	1	1	1	1	17	0	10	7	0.19	16	89.0	13.0
Longnose Dace	All	32	32	34	32	537	2	320	217	1.88	515	70.6	3.9
Longnose Sucker	All	9	9	11	9	151	14	90	61	12.40	145	241.3	92.0
Rainbow Trout	<200mm	6	6	6	6	101	4	60	41	3.28	97	149.5	36.5
Rainbow Trout	All	6	6	6	6	101	4	60	41	3.28	97	149.5	36.5
White Sucker	All	38	38	39	38	637	89	380	258	79.90	611	189.5	140.4

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 Crow Creek (Trib. of Redwater), 1996-2006

**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	
Brown Trout >=200mm	Aug 17, 1998	62	60-66	BR1
	Jun 26, 2000	91	81-104	BR1
	Aug 21, 2006	50	50-51	BR1
Green Sunfish	Aug 17, 1998	2	3-4	

Green Sunfish	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	
Rainbow Trout <200mm	Jun 26, 2000	1	1-5	
	Aug 21, 2006	16	16-17	
Rainbow Trout >=200mm	Jun 26, 2000	4	4-4	RB1
	Aug 21, 2006	1	1-2	RB2
White Sucker	Aug 17, 1998	16	16-17	
	Jun 26, 2000	7	7-8	
	Aug 21, 2006	6	6-6	

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**Site 35**


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<b>Species/Size</b>	<b>Date</b>	<b>Pop Est.</b>	<b>(95% C.I.)</b>	<b>Stream Classification</b>
Brown Trout <200mm	Sep 25, 1997	35	34-39	

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Brown Trout <200mm	Aug 17, 1998	202	173-231	
	Jun 26, 2000	57	54-63	
	Sep 14, 2006	174	174-176	
Brown Trout >=200mm	Sep 25, 1997	36	35-40	BR1
	Aug 17, 1998	43	43-44	BR1
	Jun 26, 2000	65	65-66	BR1
	Sep 14, 2006	27	27-27	BR1
Green Sunfish	Sep 25, 1997	1	1-2	
	Aug 17, 1998	8	4-42	
	Sep 14, 2006	1	1-1	
Longnose Dace	Sep 25, 1997	46	41-55	
	Aug 17, 1998	22	23-30	
	Jun 26, 2000	6	6-9	
	Sep 14, 2006	32	32-34	
Longnose Sucker	Sep 25, 1997	6	6-6	
	Aug 17, 1998	8	8-9	

Longnose Sucker	Jun 26, 2000	1	1-1	
	Sep 14, 2006	9	9-11	
Rainbow Trout <200mm	Sep 25, 1997	4	4-4	
	Sep 14, 2006	6	6-6	
Rainbow Trout >=200mm	Sep 25, 1997	2	2-2	RB2
White Sucker	Sep 25, 1997	31	23-50	
	Aug 17, 1998	10	10-11	
	Sep 14, 2006	38	38-39	

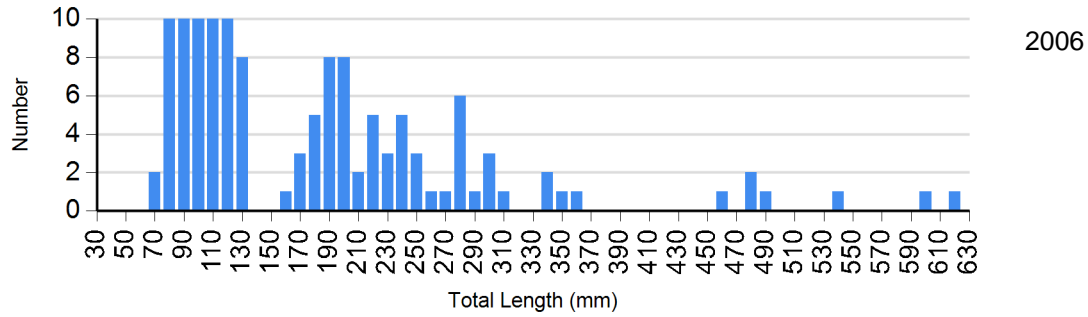
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## Length Frequency Distribution

Length frequency histogram of species sampled by year.

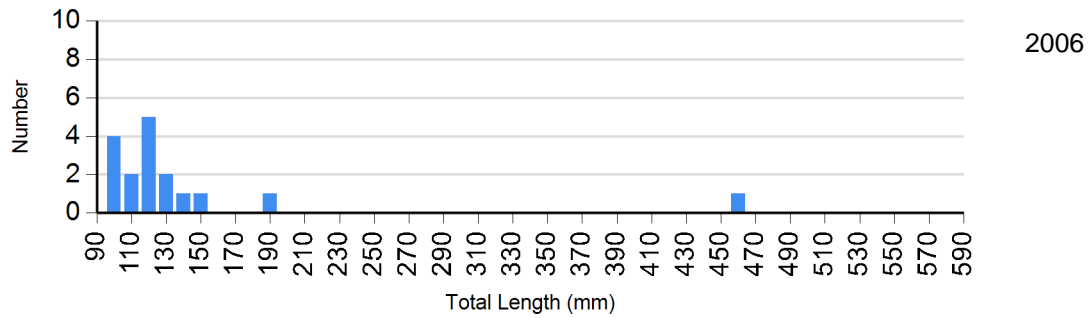
**Site:** 31

**Species:** Brown Trout



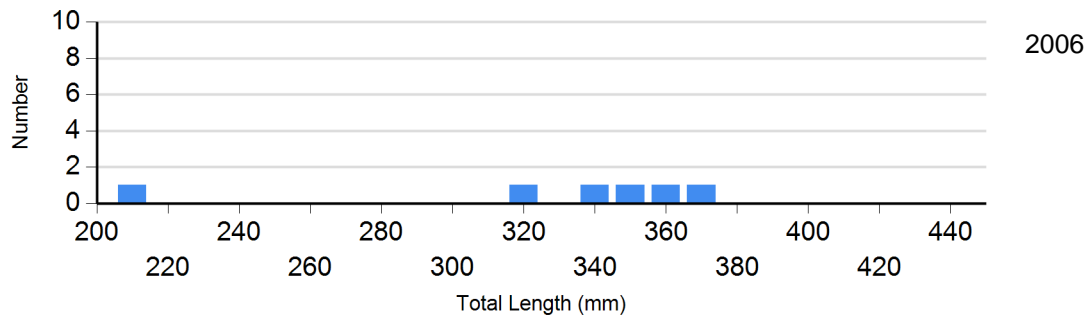
**Site:** 31

**Species:** Rainbow Trout

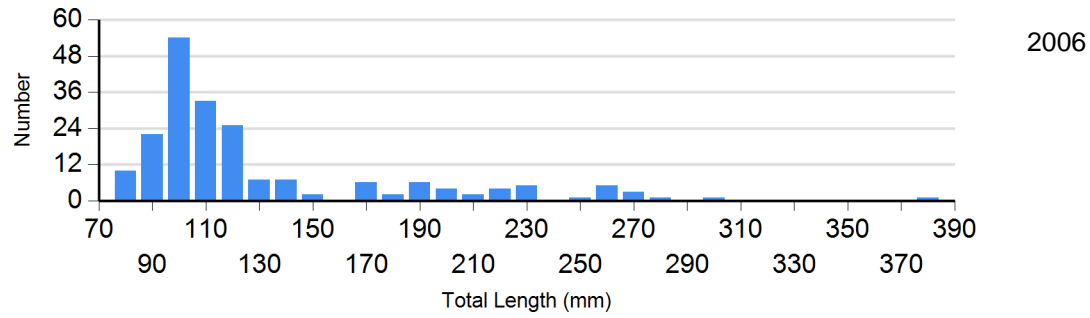


**Site:** 31

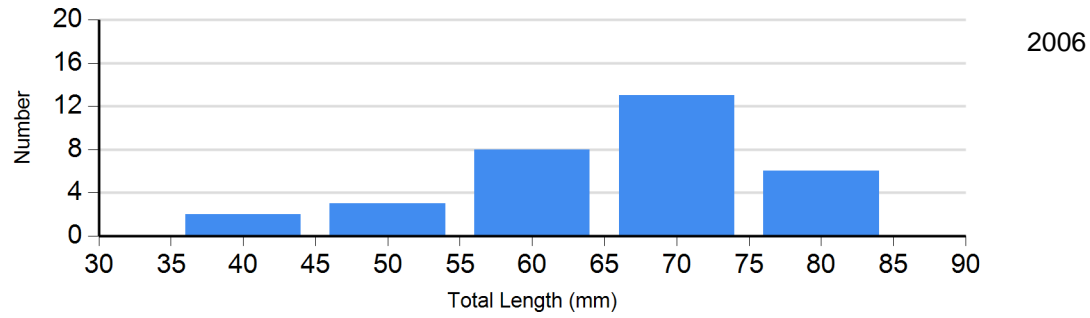
**Species:** White Sucker



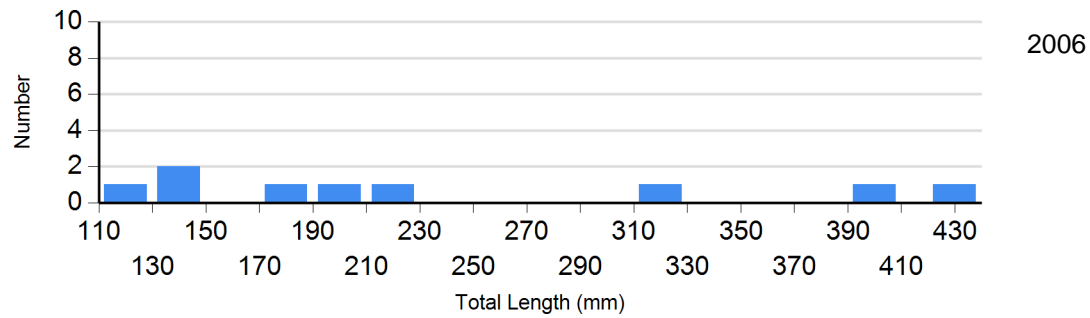
Site: 35  
Species: Brown Trout



Site: 35  
Species: Longnose Dace

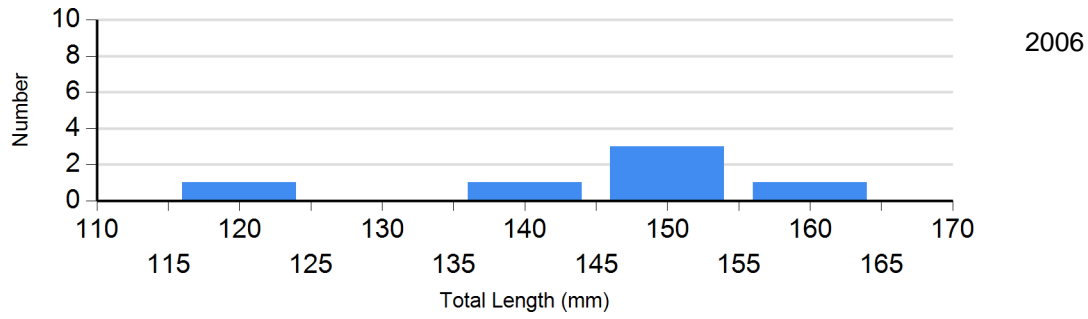


Site: 35  
Species: Longnose Sucker





**Site:** 35  
**Species:** Rainbow Trout



**Site:** 35  
**Species:** White Sucker

