

**SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY**  
**Redwater River, Butte County**  
**15-0005-00**  
**2018**

Table 1. Population and Biomass Estimates for Redwater River

**Site Number:** 664  
**Site Midpoint (Latitude, Longitude):** 44.57250408, -104.05273321  
**Survey Completed by:** GEI  
**Stream Classification:** BK0, BR0

**Date Sampled:** 08/23/2018  
**Site Length (m):** 103  
**Mean Width (m):** 1.0  
**Number of Pass:** 4  
**Conductivity (umhos/cm):**  
**pH:**  
**Water Temperature (C):**  
**Voltage:** 220

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	6	6	6	6	595	25	58	241	22.47	94	162.8	42.3
Brook Trout	All	6	6	6	6	595	25	58	241	22.47	94	162.8	42.3
Brown Trout	<200mm	1	1	3	1	99	3	10	40	2.39	16	138.0	27.0
Brown Trout	All	1	1	3	1	99	3	10	40	2.39	16	138.0	27.0

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	
<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 Redwater River, 2008-2018

**Site 664**

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Aug 23, 2017	3	3-4	
	Aug 23, 2018	6	6-6	
Brown Trout <200mm	Aug 23, 2018	1	1-3	

## Length Frequency Distribution

Length frequency histogram of species sampled by year.

**Site:** 664

**Species:** Brook Trout

