SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY

Lime Creek, Pennington County 02-0099-00

1993

 Table 1. Population and Biomass Estimates for Lime Creek

| Site Number: 12 Site Midpoint (Latitude, Longitude): 44.07911882, -103.27234080 Survey Completed by: South Dakota Game, Fish and Parks Stream Classification: BR2 | | | | | | Date Sampled: Site Length (m): Mean Width (m): Number of Pass: | | 2.8 | (um pH: Wat | Conductivity (umhos/cm): pH: Water Temperature (C): Voltage: | | 850 14.0 250 | |
|--|---------------|-----------------------------|-------------------|-----------------|-----------------|---|--------------------|-------------|-------------------|--|---------------|------------------------|---------------------------|
| Species | Size Class | Total Number Captured | Est. # in site | Upper 95% Cl | Lower 95% Cl | # per Hectacre | Kg per Hectacre | # per Km | # per Acre | lb. per Acre | # per Mile | Mean Length (mm) | Mean Weight (grams) |
| Brown Trout | <200mm | 4 | 4 | 6 | 4 | 143 | 6 | 40 | 58 | 5.42 | 64 | 160.0 | 42.5 |
| Brown Trout | >=200mm | 2 | 2 | 2 | 2 | 71 | 17 | 20 | 29 | 14.86 | 32 | 286.5 | 233.0 |
| Brown Trout | All | 6 | 6 | 7 | 6 | 214 | 23 | 60 | 87 | 20.28 | 97 | 202.2 | 106.0 |
| Largemouth Bass | All | 1 | 1 | 3 | 1 | 36 | 0 | 10 | 14 | 0.19 | 16 | 77.0 | 6.0 |
| Longnose Dace | All | 152 | 245 | 336 | 154 | 8750 | 17 | 2450 | 3544 | 14.85 | 3942 | 57.9 | 1.9 |
| White Sucker | All | 4 | 4 | 6 | 4 | 143 | 6 | 40 | 58 | 5.36 | 64 | 137.0 | 42.0 |

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 BrookTrout 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 Lime Creek, 1983-1993

Site 12

| Species/Size | Date | Pop Est. | (95% C.I.) | Stream Classification |
|---------------------|--------------|----------|------------|-----------------------|
| Brown Trout <200mm | May 17, 1993 | 4 | 4-6 | |
| Brown Trout >=200mm | May 17, 1993 | 2 | 2-2 | BR2 |
| Largemouth Bass | May 17, 1993 | 1 | 1-3 | |
| Longnose Dace | May 17, 1993 | 245 | 154-336 | |
| White Sucker | May 17, 1993 | 4 | 4-6 | |

Length Frequency Distribution

Length frequency histogram of species sampled by year.













