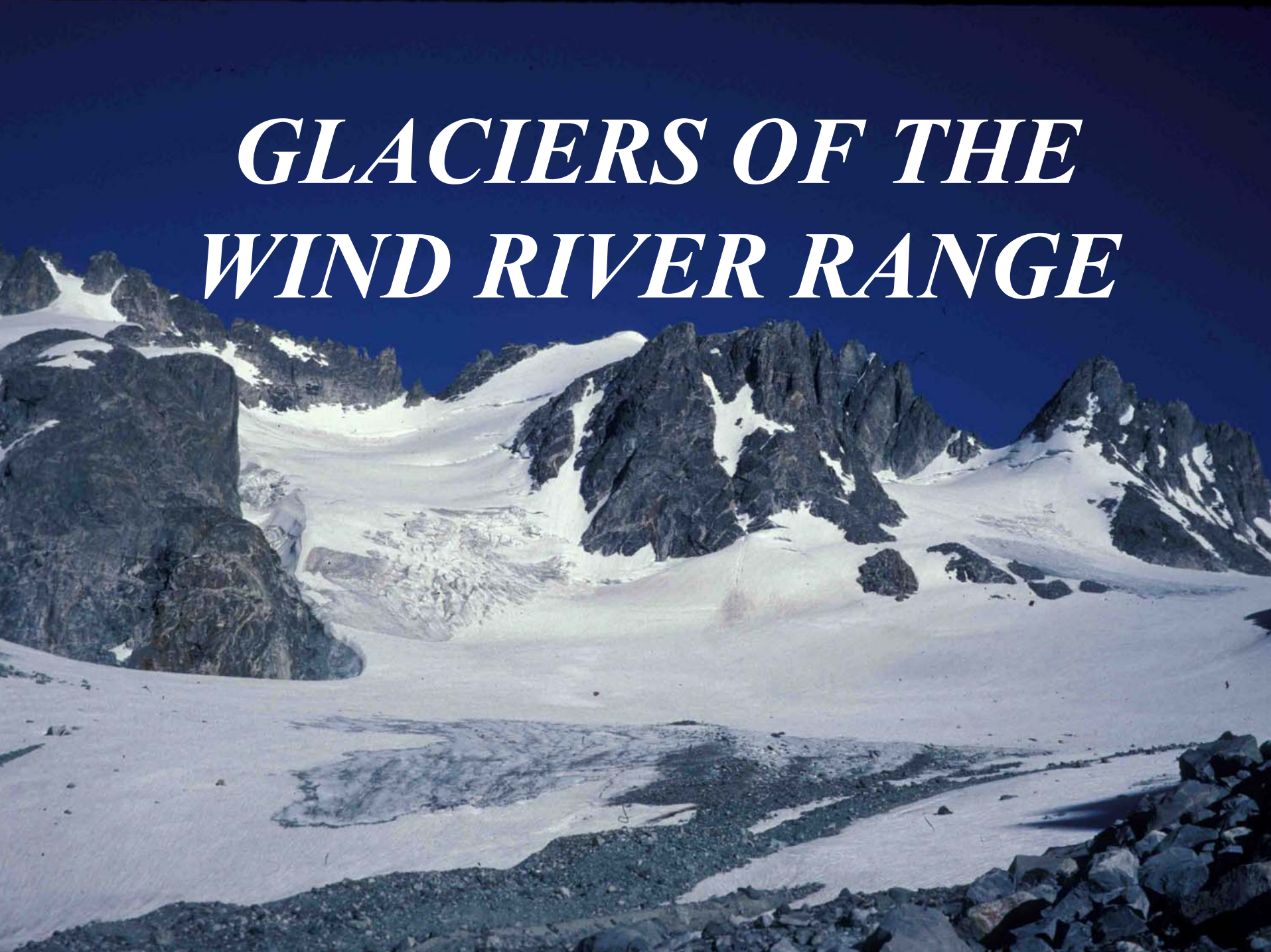
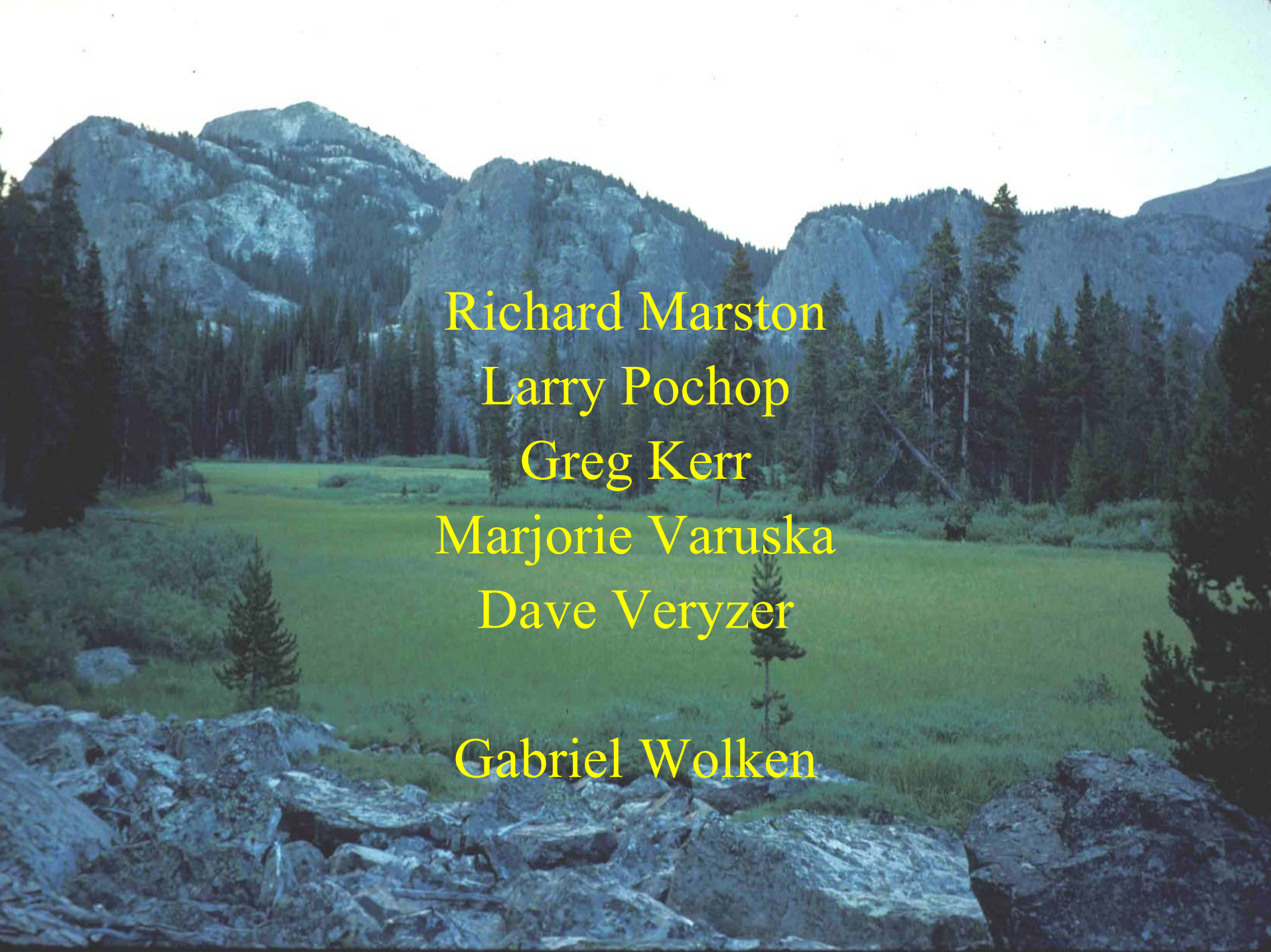
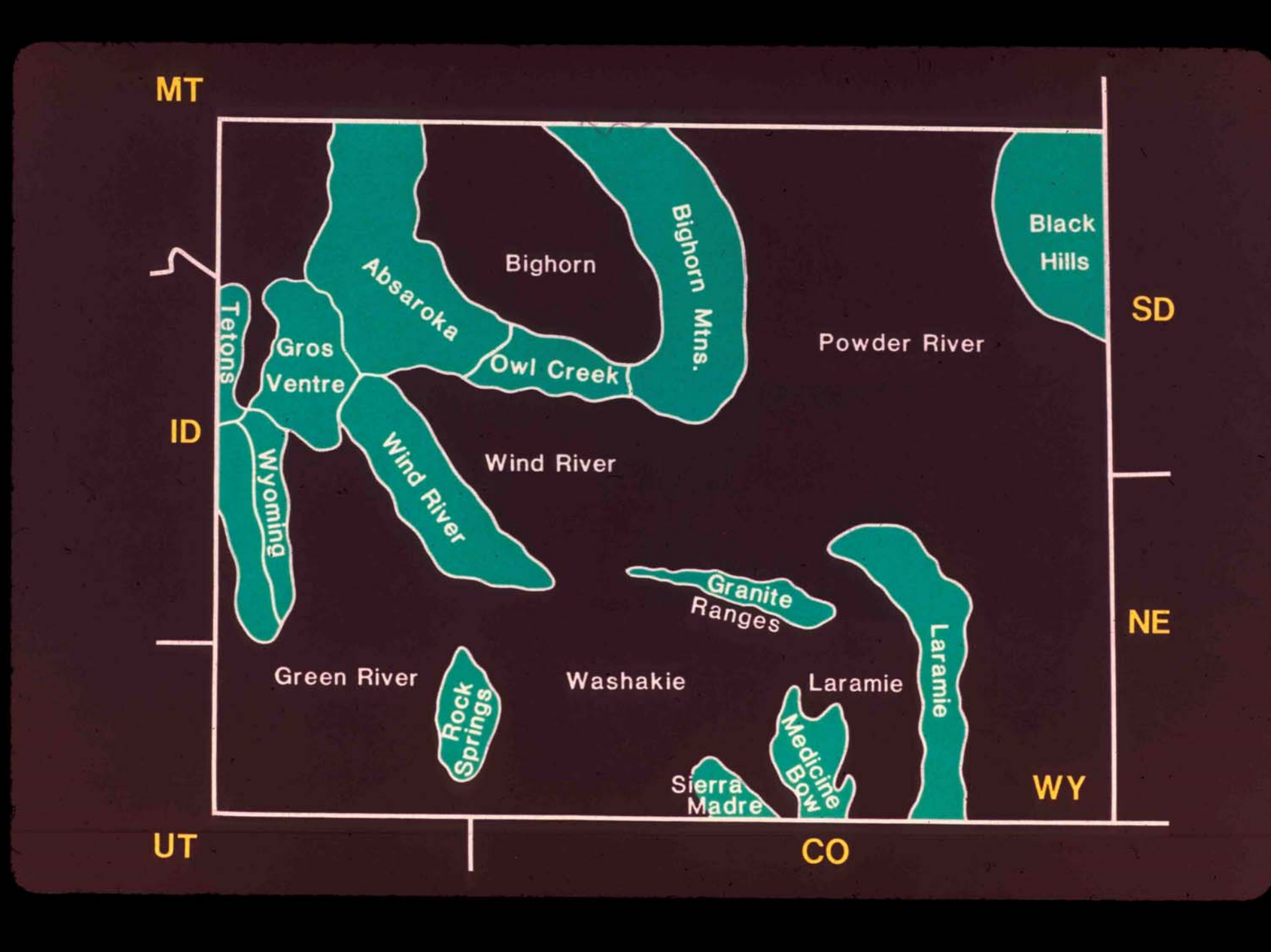
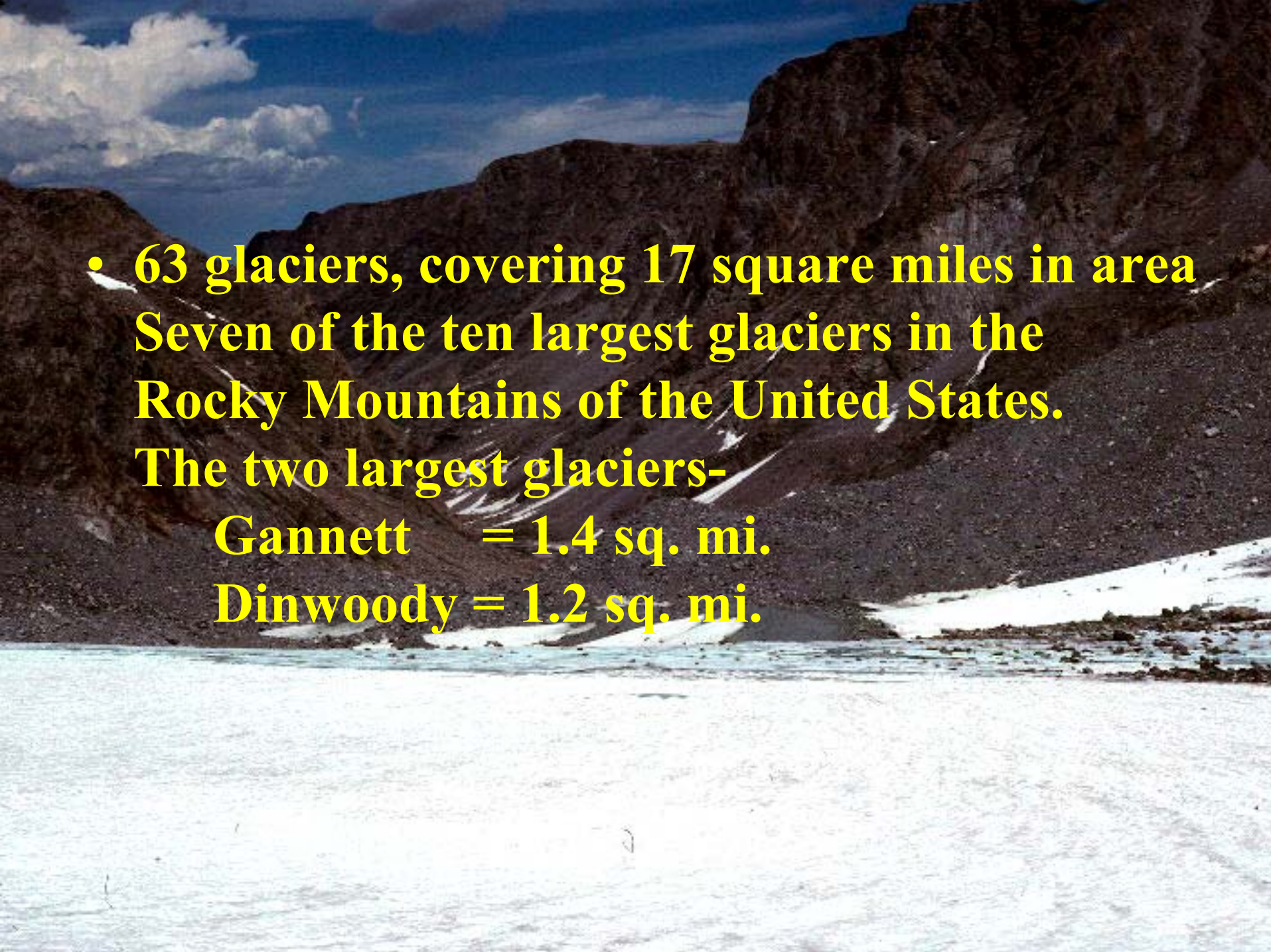
GLACIERS OF THE WIND RIVER RANGE

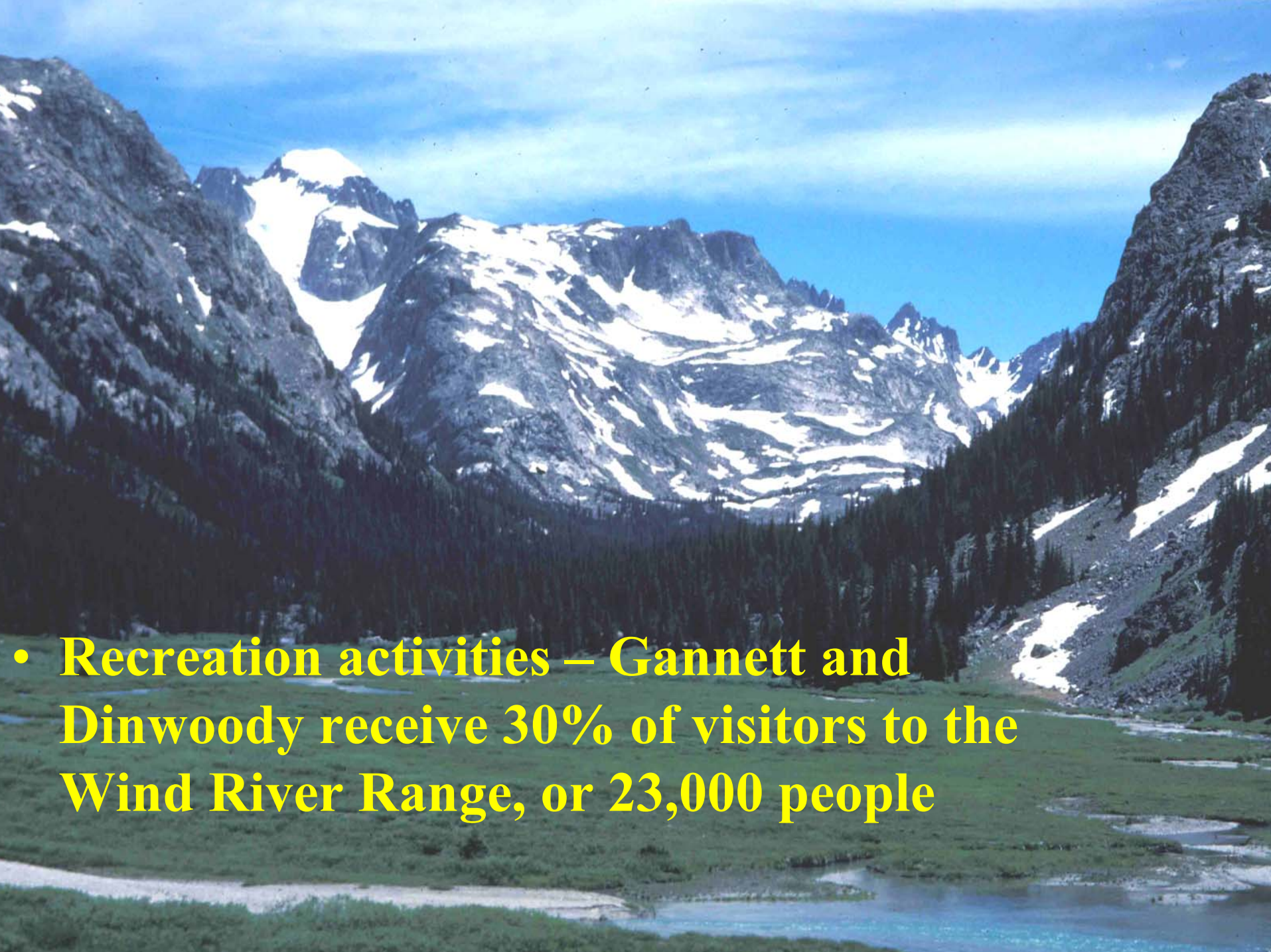



Richard Marston
Larry Pochop
Greg Kerr
Marjorie Varuska
Dave Veryzer
Gabriel Wolken


MT
ID
SD
NE
WY
UT
CO
Absaroka
Bighorn
Bighorn Mtns.
Black Hills
Tetons
Gros Ventre
Owl Creek
Powder River
Wyoming
Wind River
Wind River
Granite Ranges
Laramie
Green River
Rock Springs
Washakie
Laramie
Medicine Bow
Sierra Madre

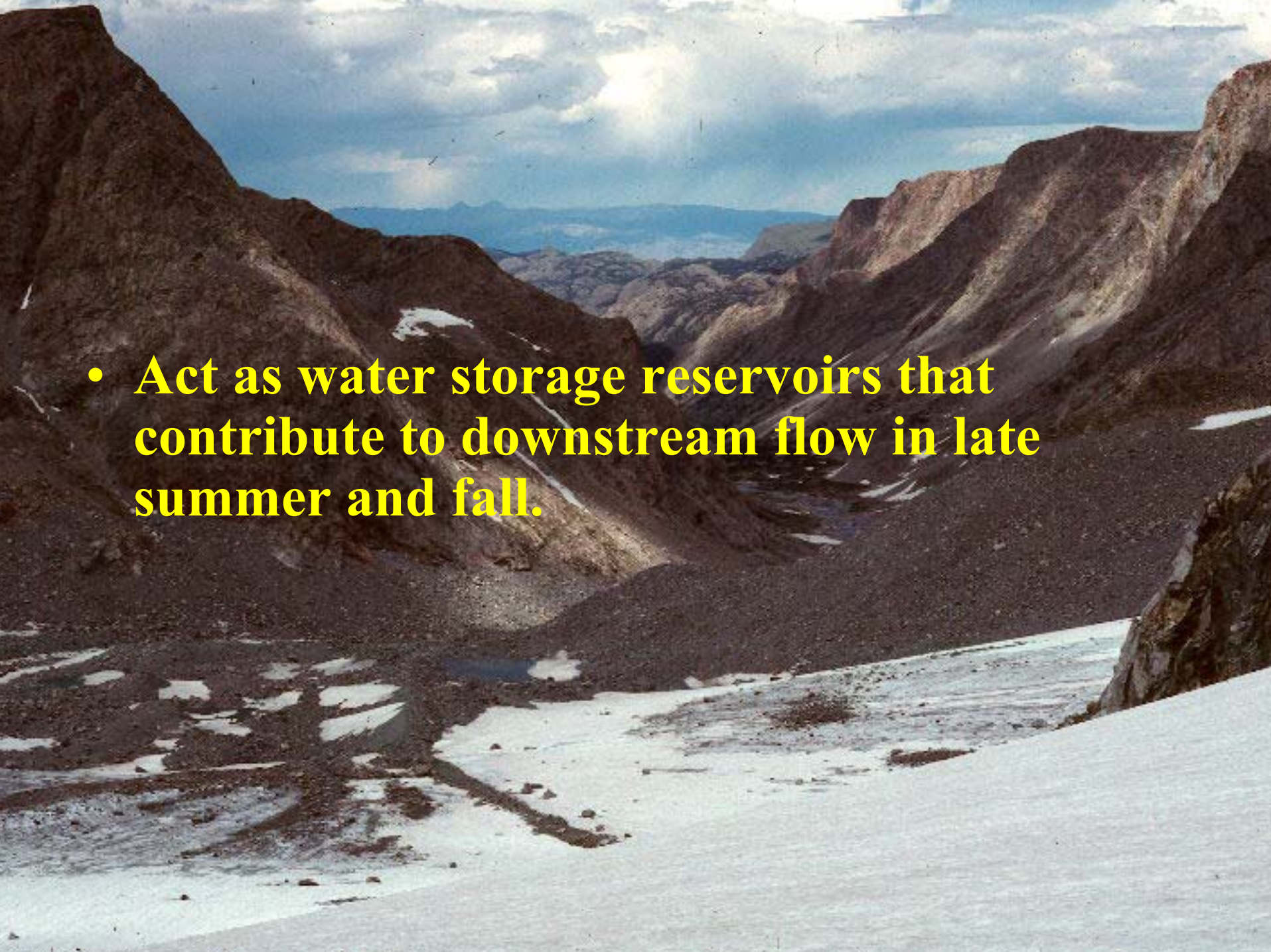


- 63 glaciers, covering 17 square miles in area
  Seven of the ten largest glaciers in the Rocky Mountains of the United States.
  The two largest glaciers-
  Gannett = 1.4 sq. mi.
  Dinwoody = 1.2 sq. mi.

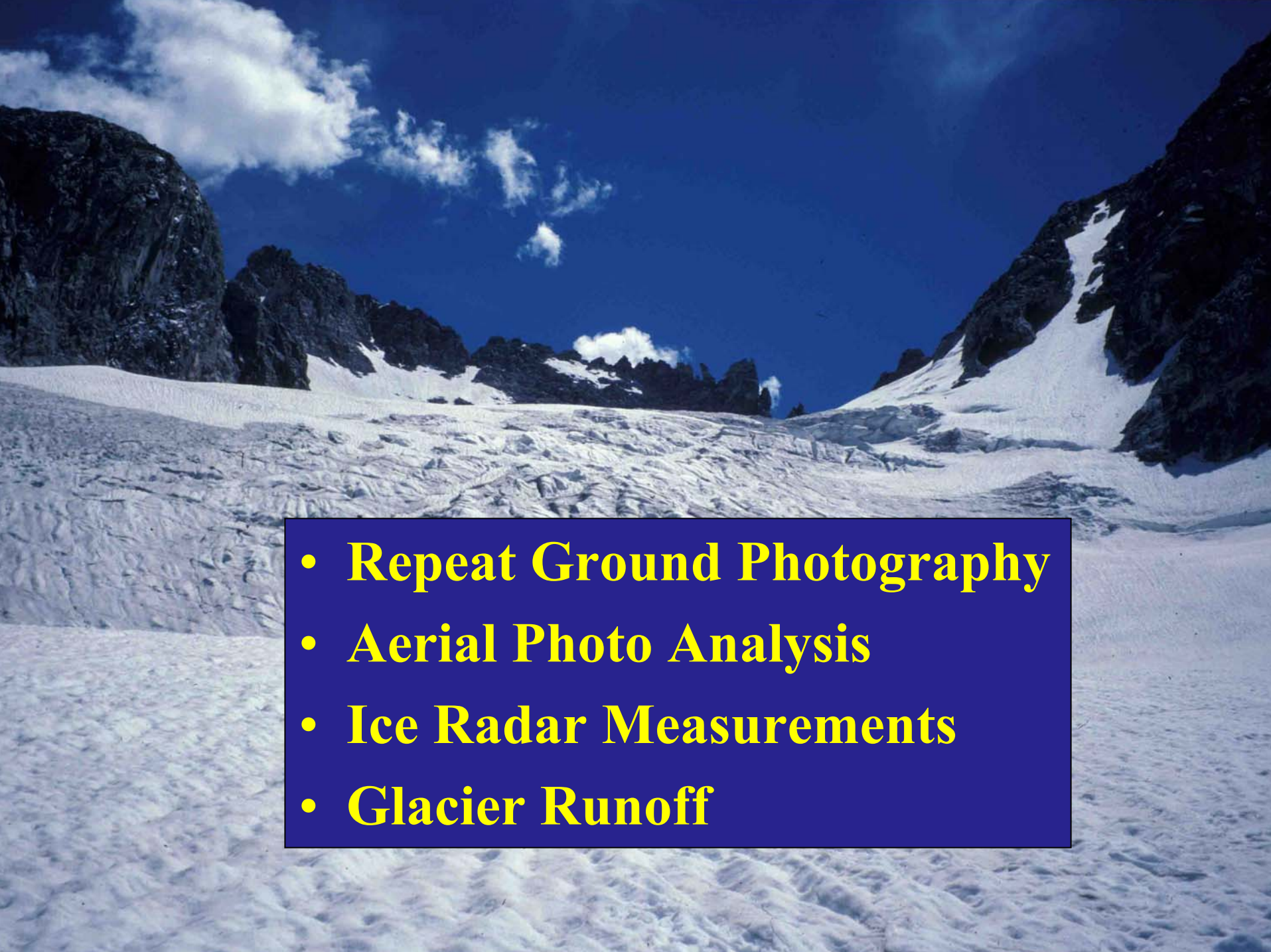


- **Recreation activities – Gannett and Dinwoody receive 30% of visitors to the Wind River Range, or 23,000 people**

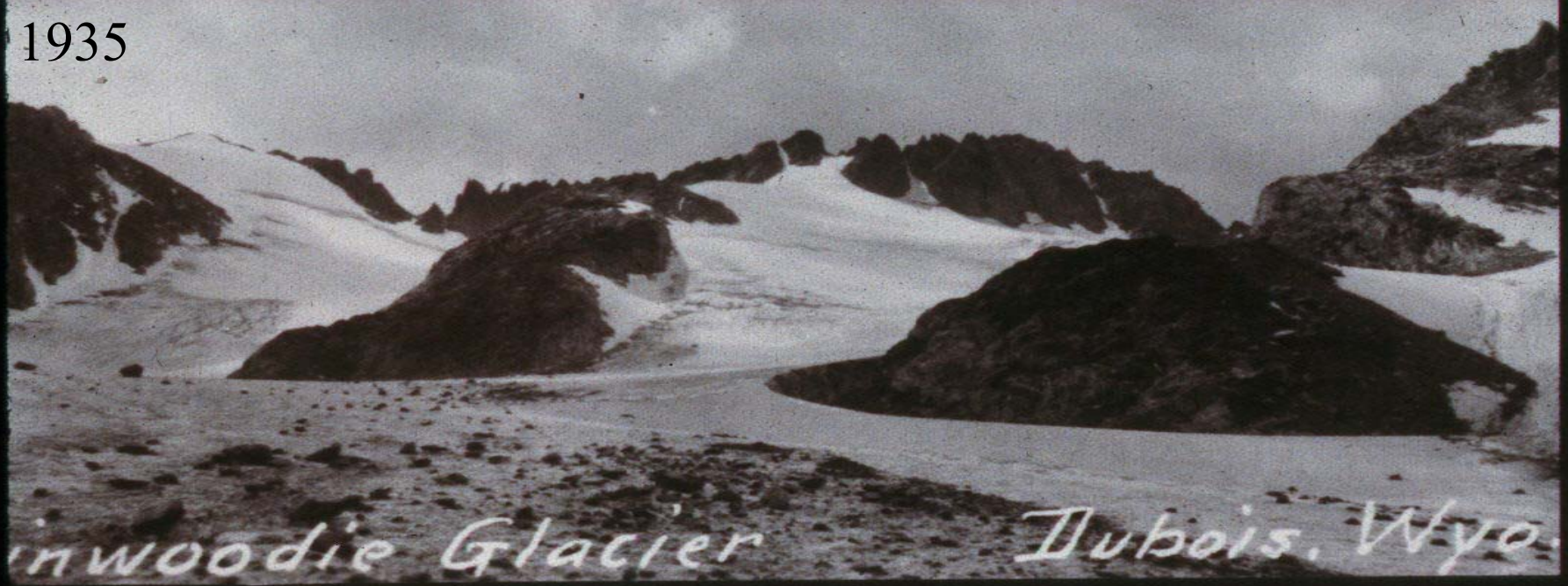

Scientific Research



- **Act as water storage reservoirs that contribute to downstream flow in late summer and fall.**

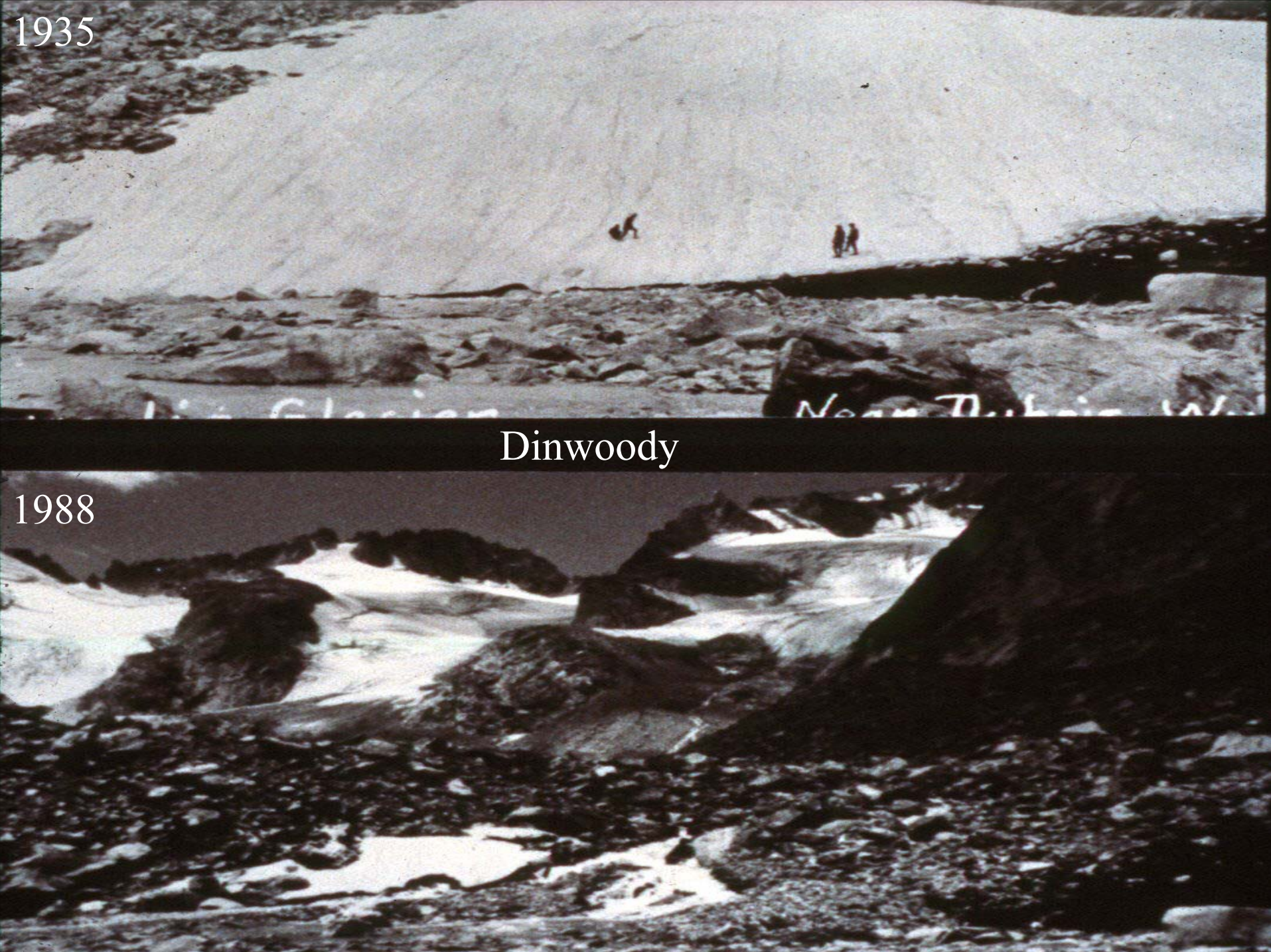

• Repeat Ground Photography
• Aerial Photo Analysis
• Ice Radar Measurements
• Glacier Runoff

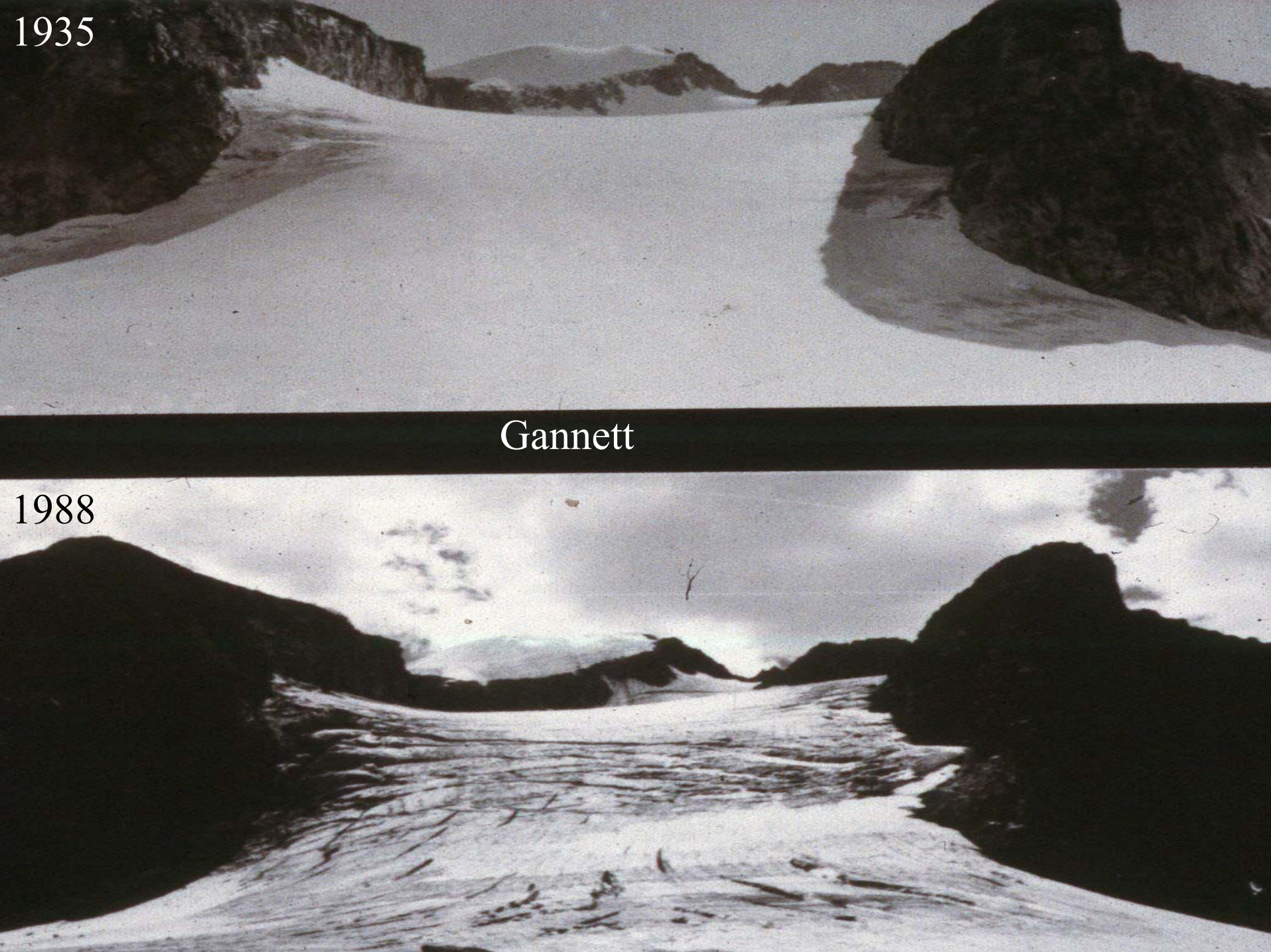
1935

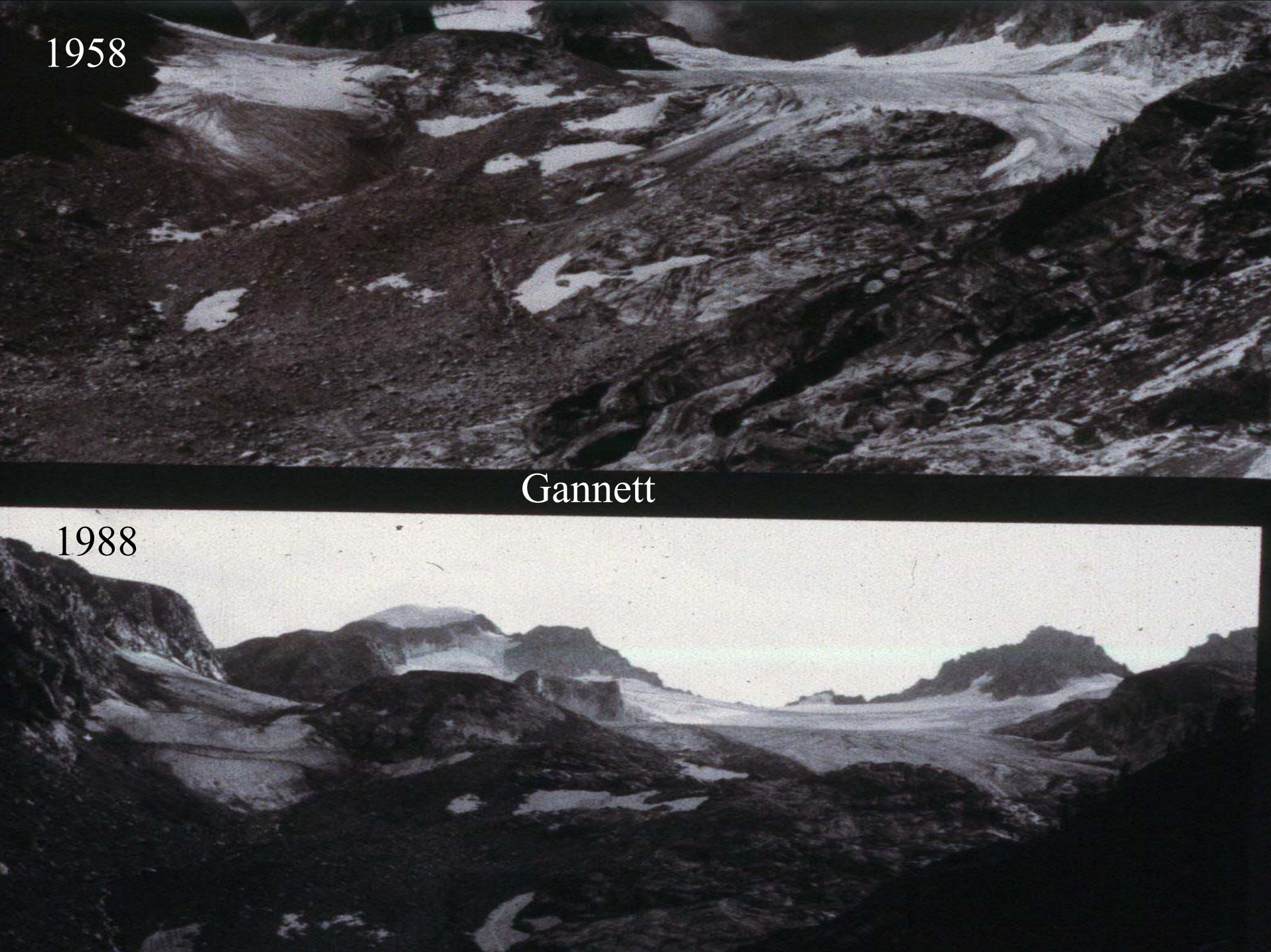


Dinwoody

1988

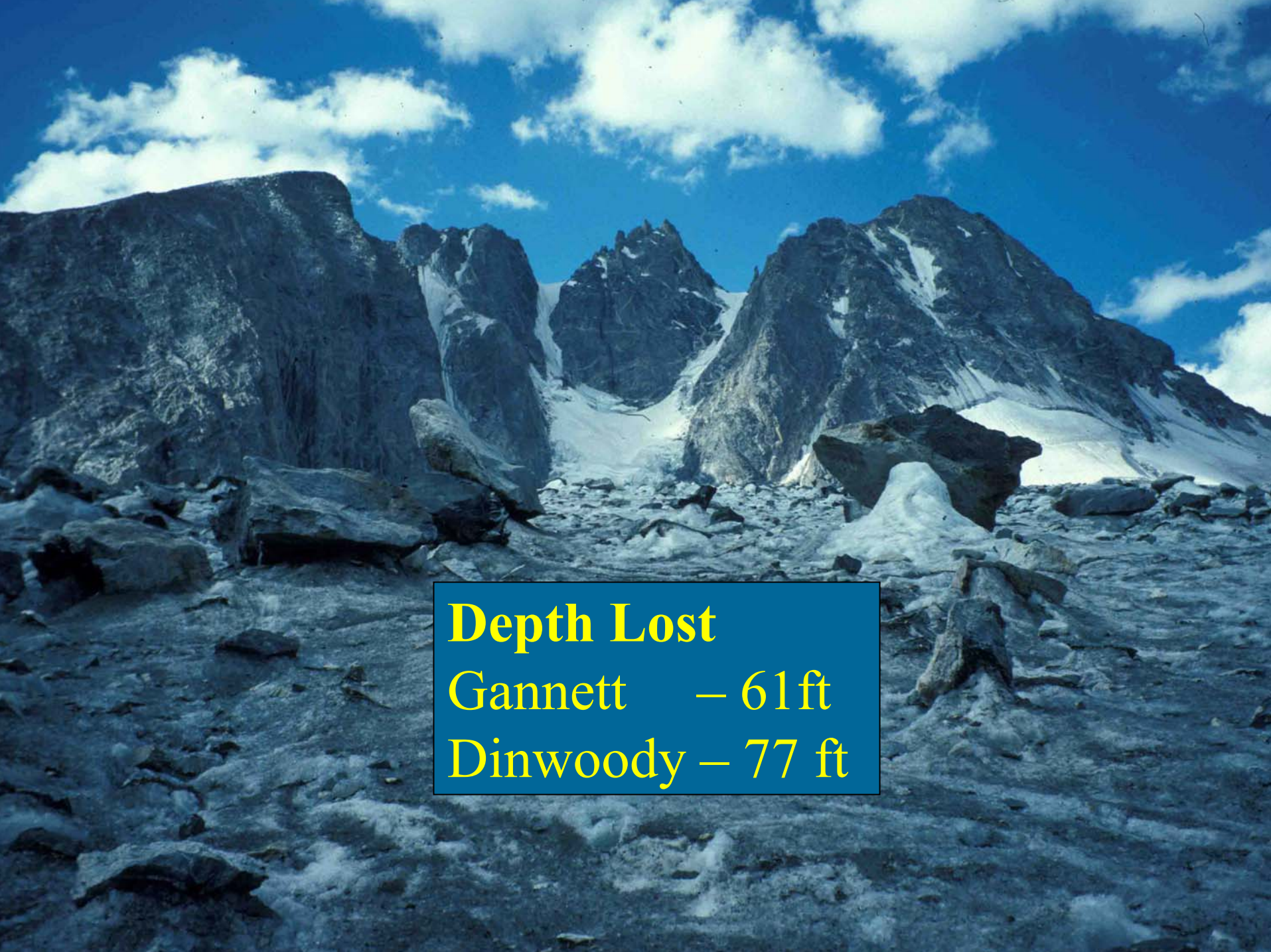

1935
Dinwoody
1988

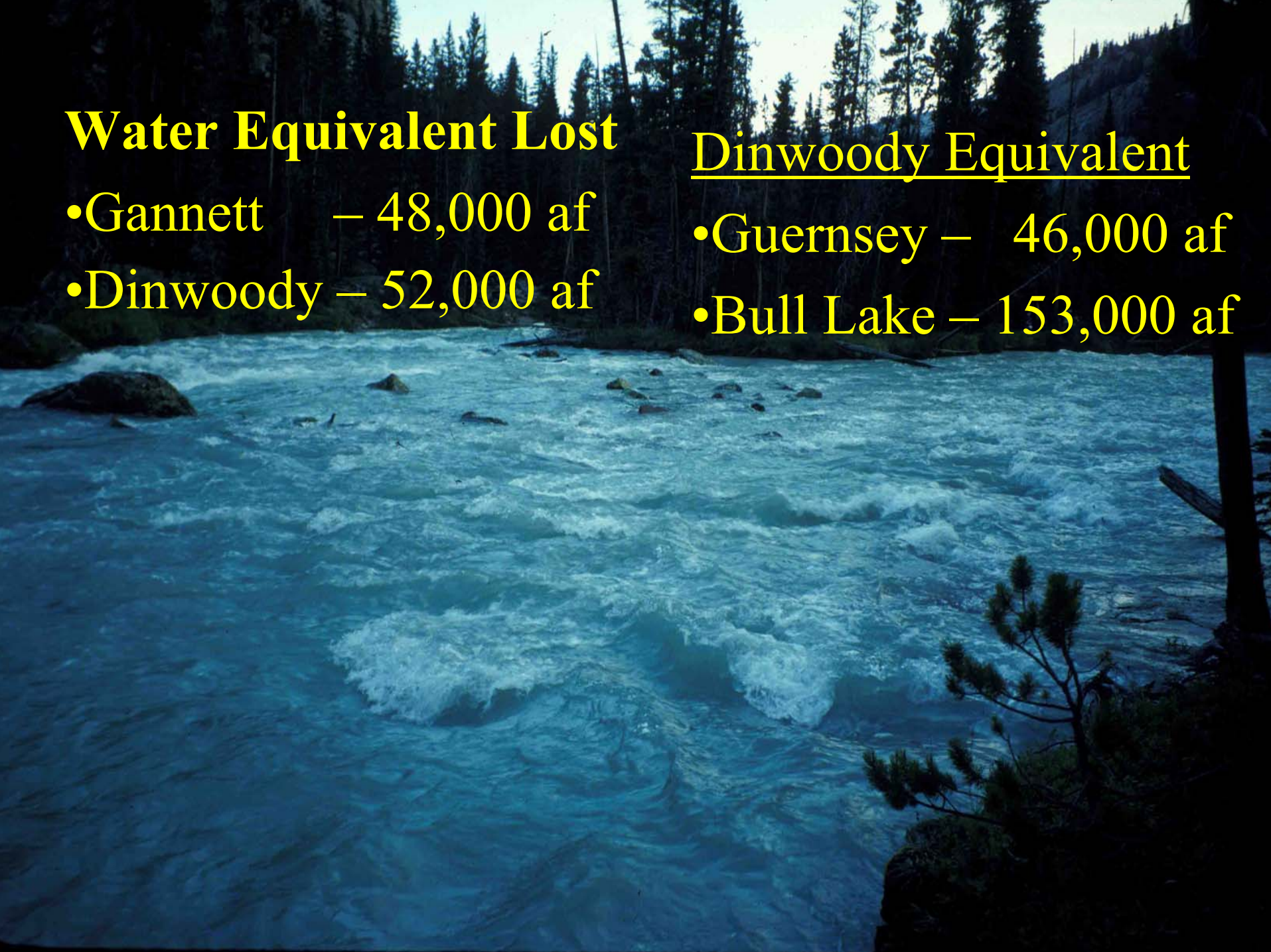

1935
Gannett
1988


1958
Gannett
1988

1958-1983
GS-VBMB
3-65
9-4-66


1994


Depth Lost
Gannett – 61ft
Dinwoody – 77 ft



Water Equivalent Lost

- Gannett – 48,000 af
- Dinwoody – 52,000 af

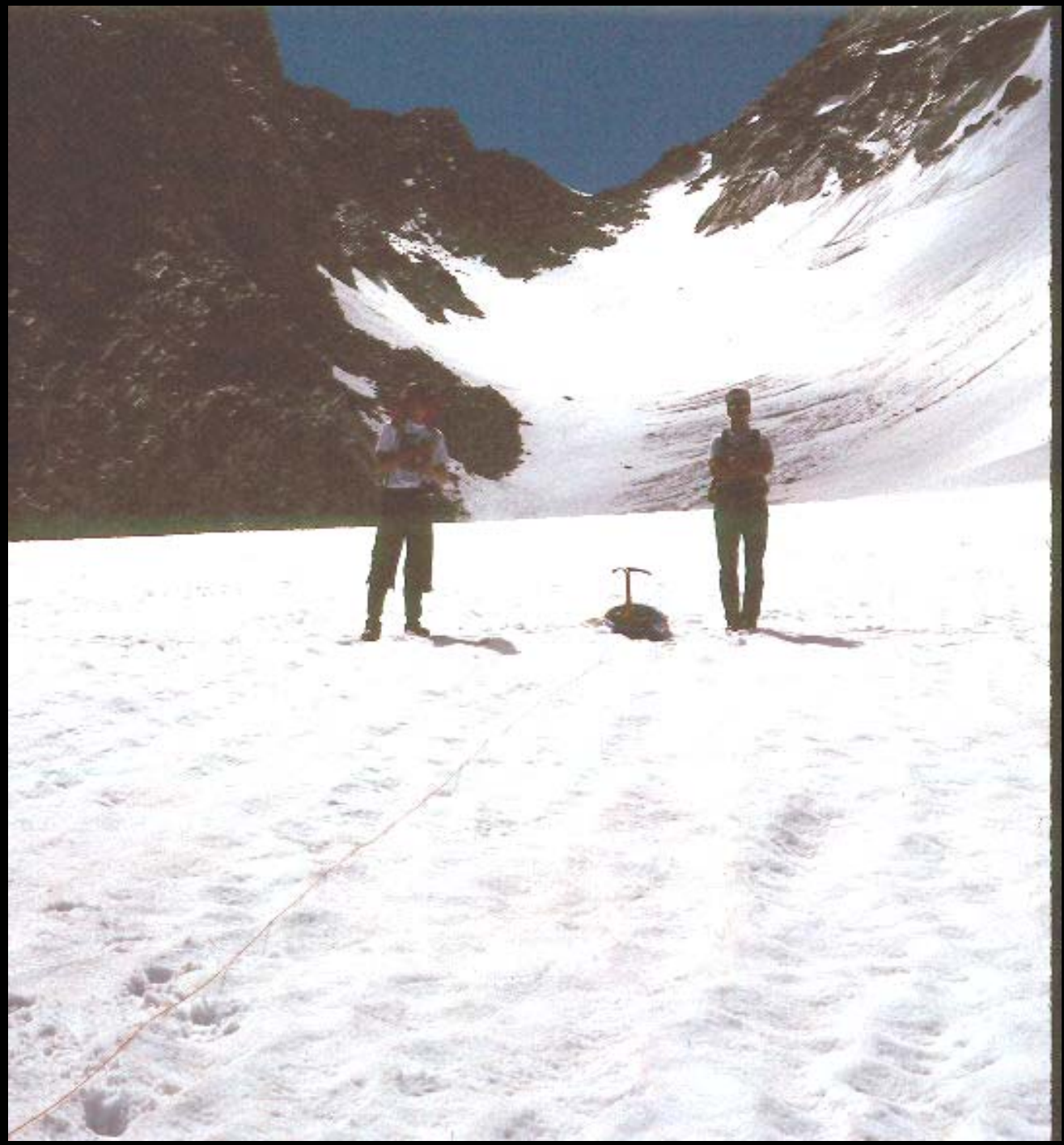
Dinwoody Equivalent

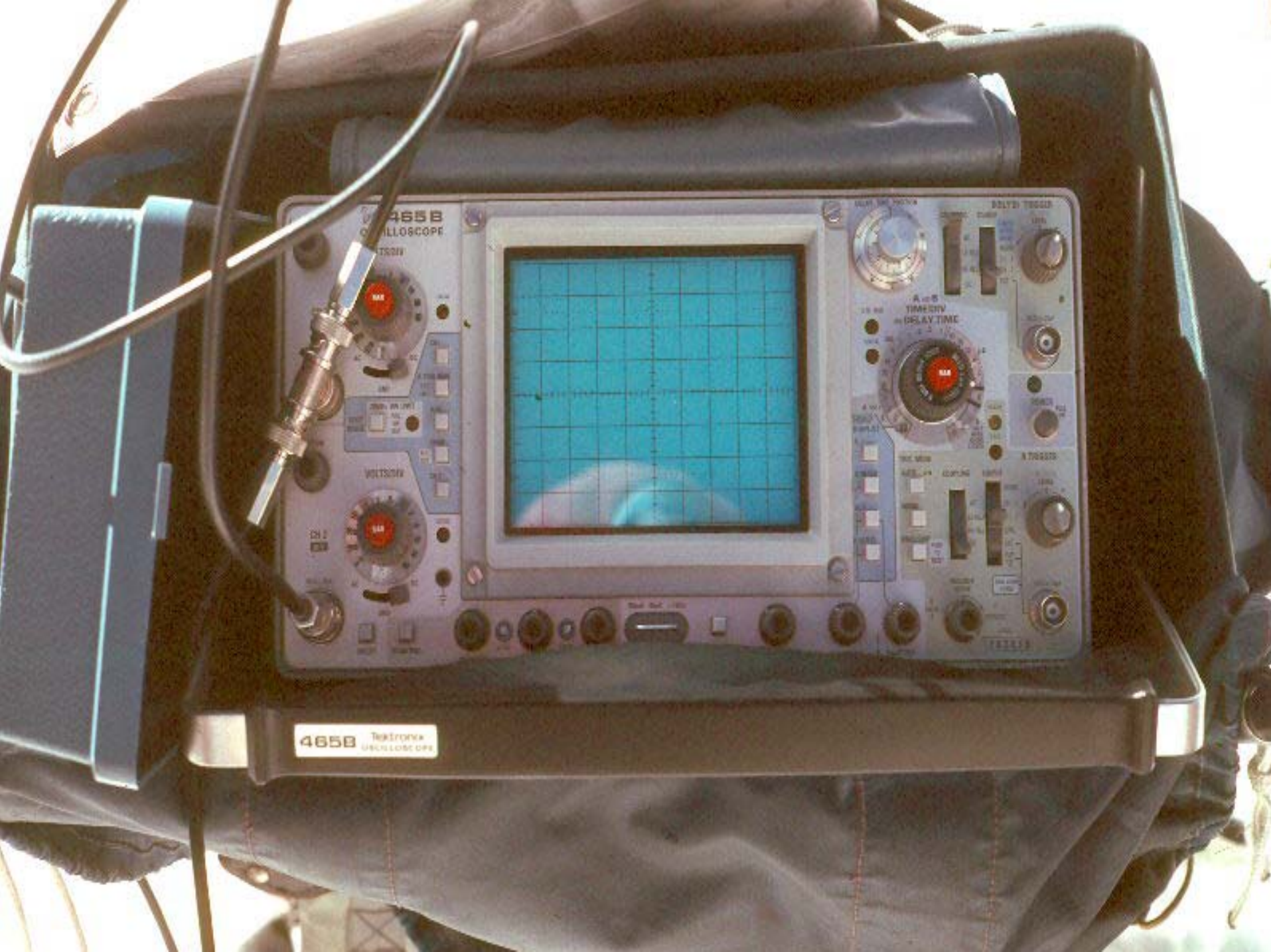
- Guernsey – 46,000 af
- Bull Lake – 153,000 af

Glacier Extent (1950-1999)

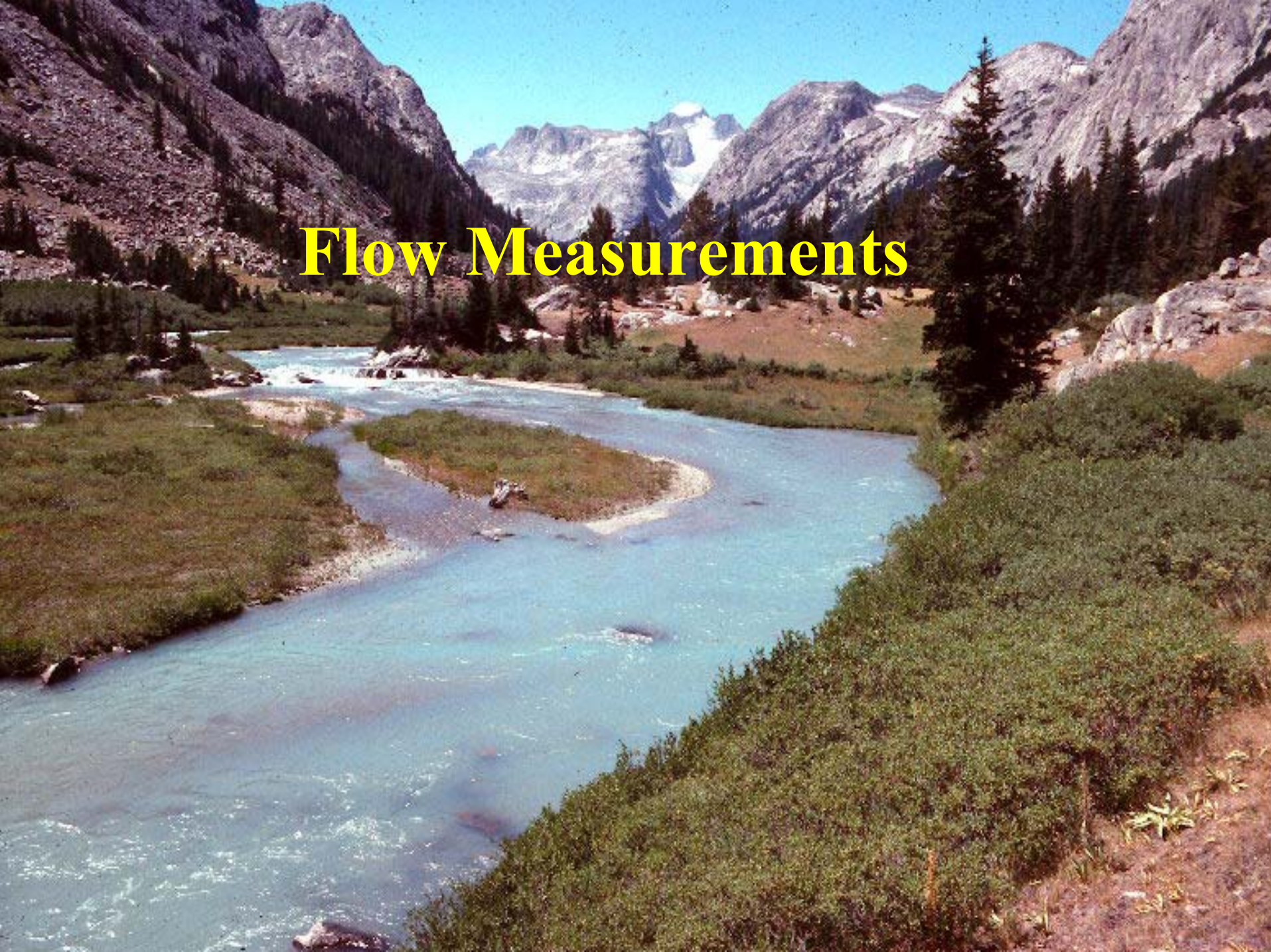
Year	Total Surface Area (mi^2)	Loss Change (%)
1950	1.34	0.0
1958	1.32	0.86
1989	1.12	15.41
1999	0.85	24.74
Total Change 49 yr.		Total Change 36.89%


Ice Depth
0 –364 ft




465B
OSCILLOSCOPE
VOLTS/DIV
TIME/DIV
DELAY TIME
465B Tektronix


0 100 200 300 400 500 m
•10 Ice thickness remaining (meters)
Isopach interval 10 meters, dashed where inferred


Flow Measurements

Dinwoody Creek Gaging Station

1988 July Runoff 30,660 af

Dinwoody & Gannett Contribution 13.3%

Dinwoody Creek Flow

- **Glaciers contribute**

  27% of Sept.

  32% of Oct.

Impacts & Significance

- Glaciers on decline
- Runoff changes
- Supply issues
- Climate Change?
- Water Planning