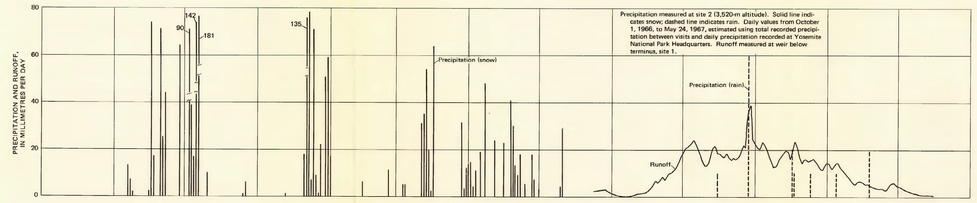
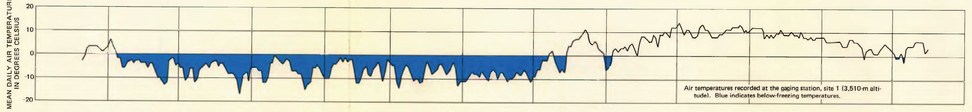
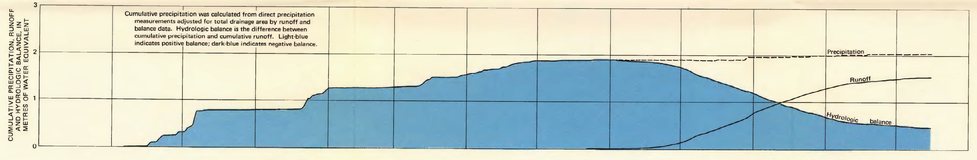
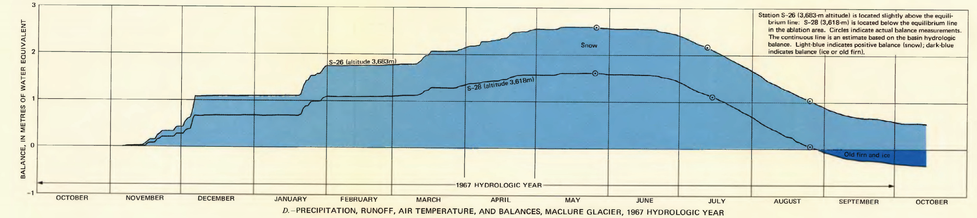



*D.*—PRECIPITATION, RUNOFF, AIR TEMPERATURE, AND BALANCES, MACLURE GLACIER, 1967 HYDROLOGIC YEAR

*A.*—INSTRUMENT LOCATIONS, GLACIER AND DRAINAGE BASIN BOUNDARIES, AND TRANSIENT SNOWLINE, OCTOBER 25, 1966

*B.*—MEASURED WINTER SNOW BALANCE, $b_m(s)$, MAY 14, 1967

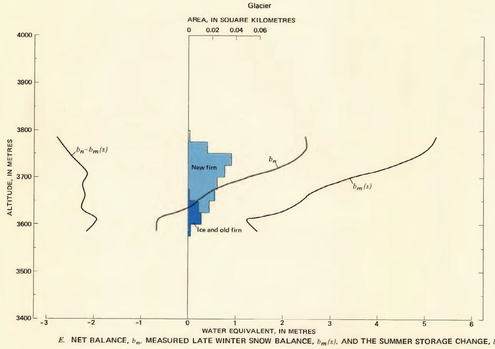
*C.*—NET BALANCE, $b_n$, OCTOBER 15, 1967

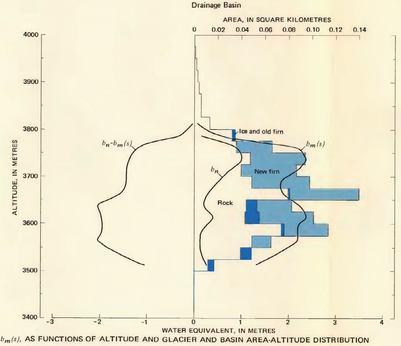
SCALE 1:10 000

5 0 5 1 1.5 KILOMETRES

½ 0 ½ MILE

CONTOUR INTERVAL 25 METRES
DATUM IS MEAN SEA LEVEL

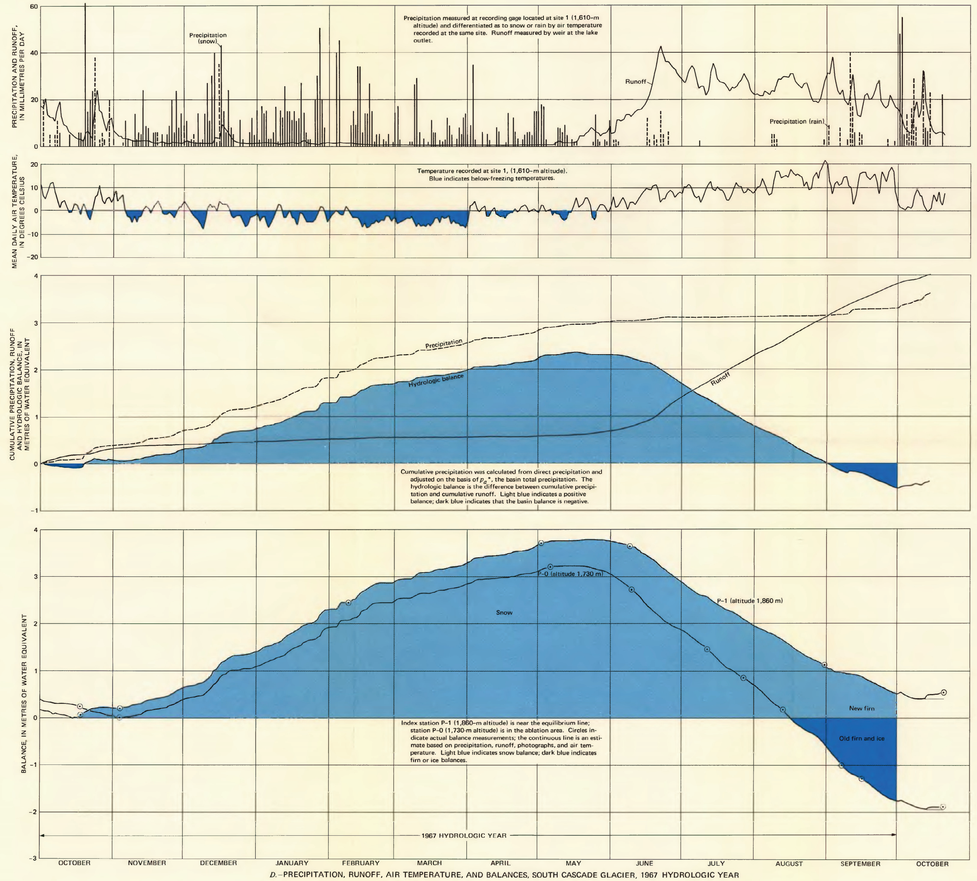



*E.* NET BALANCE, $b_n$, MEASURED LATE WINTER SNOW BALANCE, $b_m(s)$, AND THE SUMMER STORAGE CHANGE, $b_n - b_m(s)$, AS FUNCTIONS OF ALTITUDE AND GLACIER AND BASIN AREA-ALTITUDE DISTRIBUTION

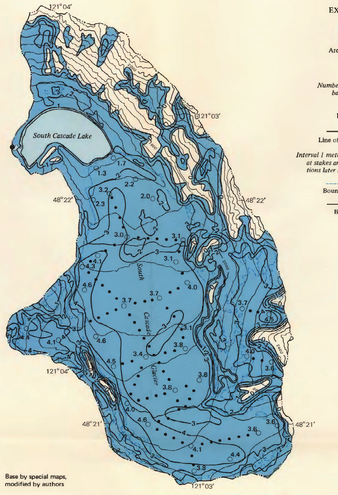
# MAPS AND GRAPHS SHOWING DATA FOR 1967 HYDROLOGIC YEAR, MACLURE GLACIER, SIERRA NEVADA, CALIFORNIA

U.S. GOVERNMENT PRINTING OFFICE: 1974—737-034/39

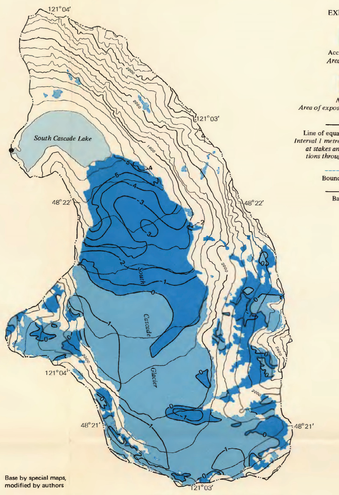



*D.*—PRECIPITATION, RUNOFF, AIR TEMPERATURE, AND BALANCES, SOUTH CASCADE GLACIER, 1967 HYDROLOGIC YEAR

*A.*—INSTRUMENT LOCATIONS AND SELECTED TRANSIENT SNOWLINES




*B.* MEASURED WINTER SNOW BALANCE, $b_w(x)$, MAY 4-5, 1967



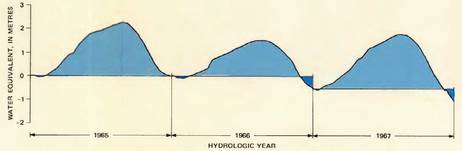

*C.*—NET BALANCE, $b_n$ OCTOBER 14, 1967

SCALE 1:20 000

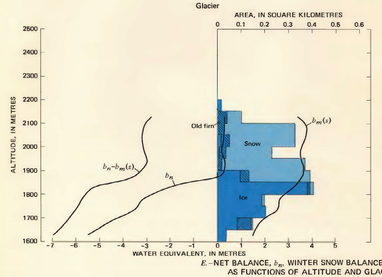
1 .5 0 1 2 3 KILOMETRES

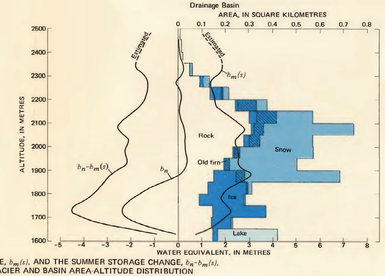
1 ½ 0 1 MILE

CONTOUR INTERVAL 50 METRES
DATUM IS MEAN SEA LEVEL




*F.*—THE CUMULATIVE BASIN BALANCE SINCE OCTOBER 1, 1964. THE HYDROLOGIC YEAR (OCTOBER 1-SEPTEMBER 30) IS SHOWN AND USED AS THE ZERO DATUM FOR EACH YEAR. DARK-BLUE INDICATES MASS LOSS FOR THAT YEAR

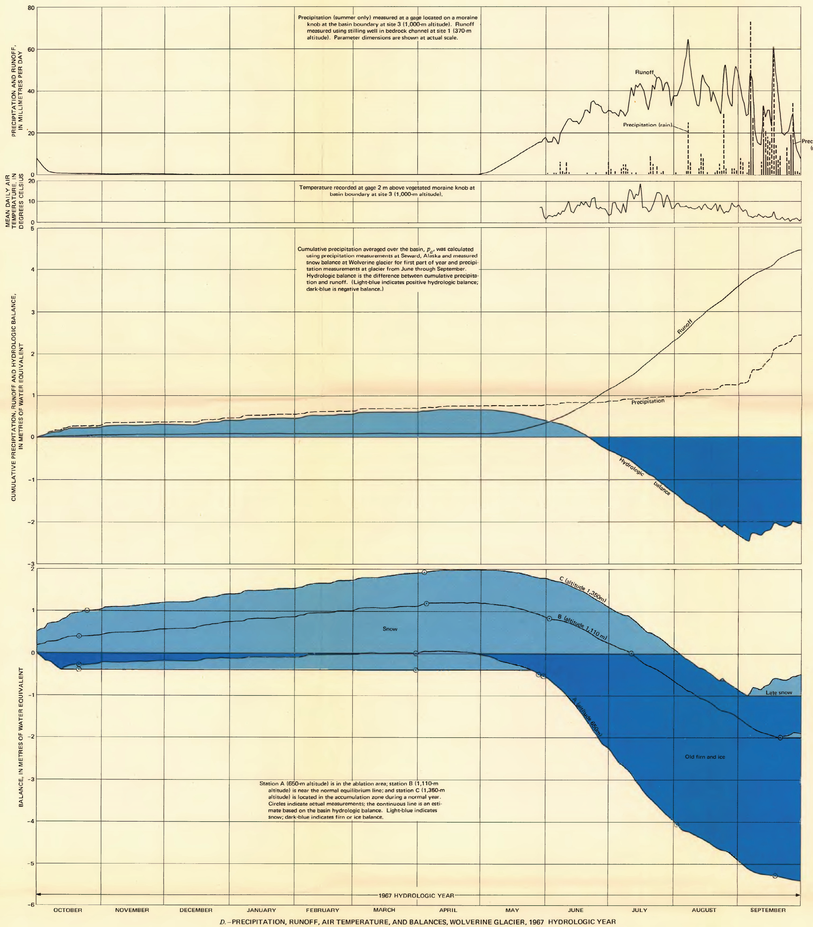



*E.*—NET BALANCE, $b_n$, WINTER SNOW BALANCE, $b_w(x)$, AND THE SUMMER STORAGE CHANGE, $b_n-b_w(x)$, AS FUNCTIONS OF ALTITUDE AND GLACIER AND BASIN AREA-ALTITUDE DISTRIBUTION

# MAPS AND GRAPHS SHOWING DATA FOR 1967 HYDROLOGIC YEAR, SOUTH CASCADE GLACIER, NORTH CASCADE RANGE, WASHINGTON

U.S. GOVERNMENT PRINTING OFFICE: 1974—777-014/29




*D.*—PRECIPITATION, RUNOFF, AIR TEMPERATURE, AND BALANCES, WOLVERINE GLACIER, 1967 HYDROLOGIC YEAR

*A.*—INSTRUMENT LOCATIONS, TRANSIENT SNOWLINES, AND FIRN LINES

EXPLANATION

Stream gaging station

Index station on glacier, and identification

Instrument site

May 23

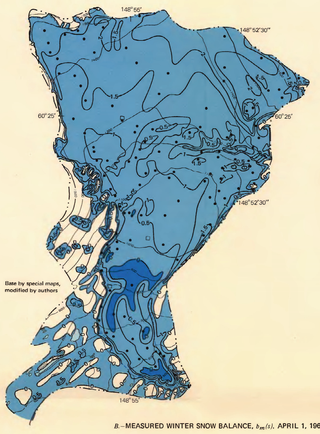
July 11

Aug. 28

Snowline, identified by date

Boundary of glacier ice

Basin boundary




*B.*—MEASURED WINTER SNOW BALANCE, $b_m(s)$, APRIL 1, 1967

EXPLANATION

Area of snow cover

Ablation area
*Area of glacier ice and old firn*

Snow probe
*Snow depth measurements obtained*

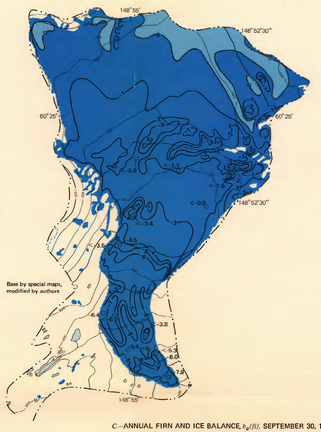
Snow pit
*Snow density, depth, and temperature measurements obtained*

0.5

Line of equal snow balance
*Interval 0.5 metre. Based on measurement at snow probes and pits and on transient snowline positions later in season. Lines in the accumulation area of the glacier are shaped after the distribution of convex and concave areas and location of large snow dunes*

Boundary of glacier ice

Basin boundary




*C.*—ANNUAL FIRN AND ICE BALANCE, $b_a(t)$, SEPTEMBER 30, 1967

EXPLANATION

Accumulation area
*Area of net firnification*

Ablation area
*Area of glacier ice and old firn*

0.6

Stake
*Number is balance, in metres*

2

Line equal annual firn and ice balance
*Interval 1 metre. Based on measurements at stakes, snow probes, and snow pits and on transient snowline positions throughout the summer in the ablation areas and distribution of convex and concave surfaces in the accumulation areas*

Boundary of glacier ice

Basin boundary

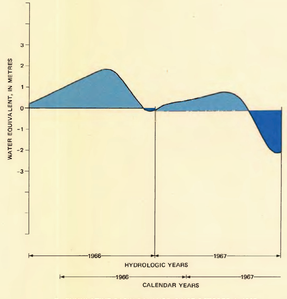
SCALE 1:40 000

1 0 1 2 3 4 5 KILOMETRES

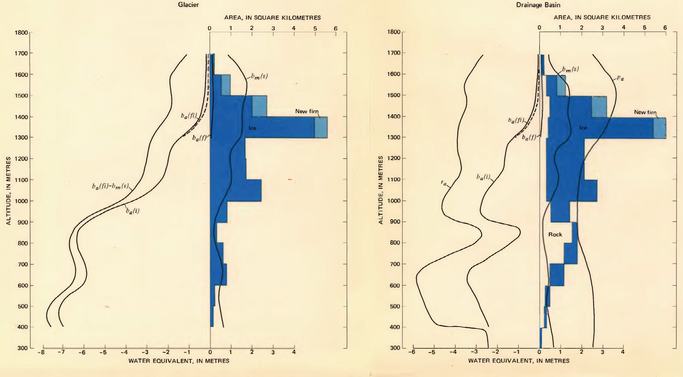
1 0 1 2 MILES

CONTOUR INTERVAL 100 METRES

DATUM IS PRE-1964 MEAN SEA LEVEL



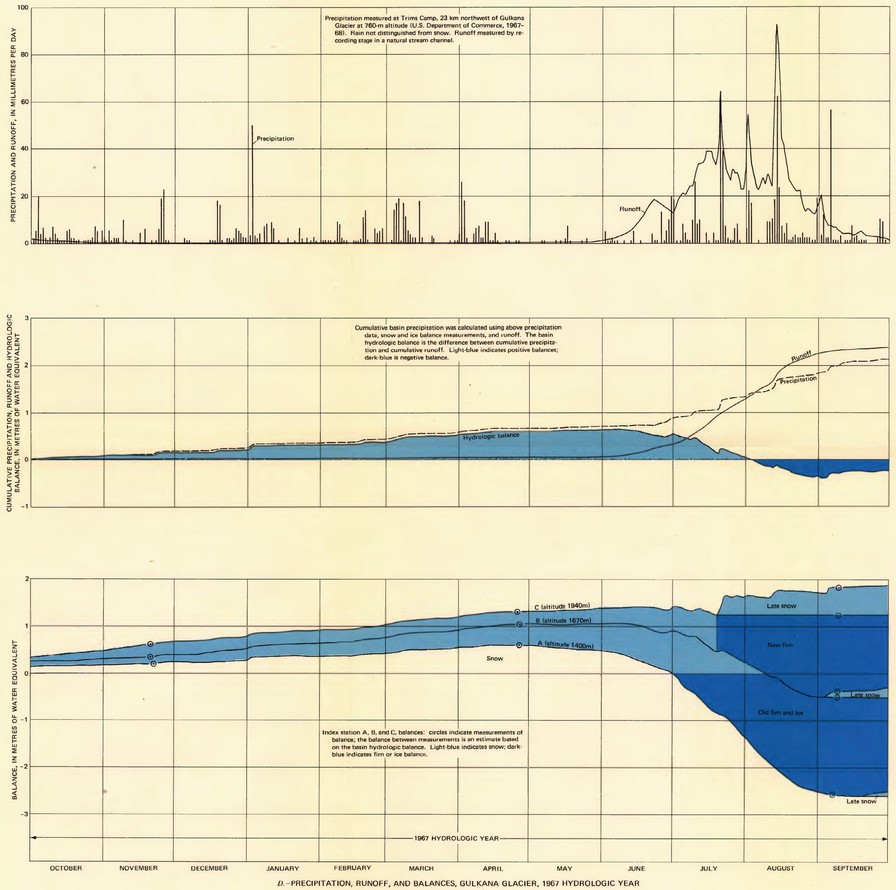

*F.*—CUMULATIVE BASIN BALANCE, SINCE OCTOBER 1, 1965



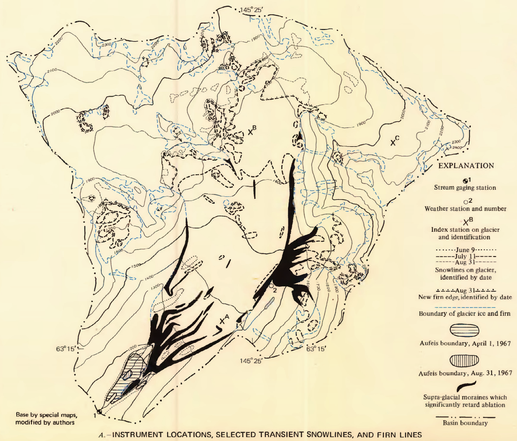

*E.*—ALTITUDE DISTRIBUTION OF AREA; GLACIOLOGICAL BALANCES, $b_m(s)$, $b_a(t)$, $b_a(f)$, $b_a(i)$; INDEX TO SUMMER ABLATION, $b_a(f)-b_m(s)$; ANNUAL PRECIPITATION, $p_a$; AND ANNUAL RUNOFF, $r_a$

# MAPS AND GRAPHS SHOWING DATA FOR 1967 HYDROLOGIC YEAR, WOLVERINE GLACIER, KENAI MOUNTAINS, ALASKA

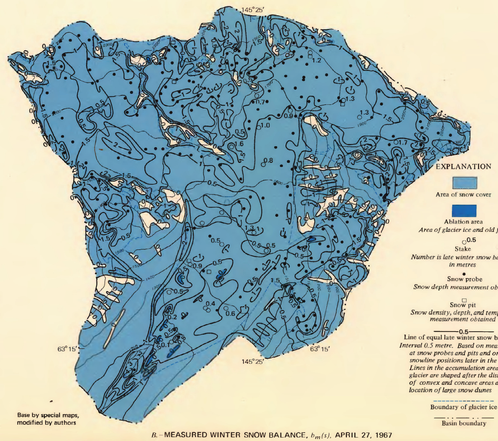
U.S. GOVERNMENT PRINTING OFFICE: 1970—777-024/59




D.—PRECIPITATION, RUNOFF, AND BALANCES, GULKANA GLACIER, 1967 HYDROLOGIC YEAR



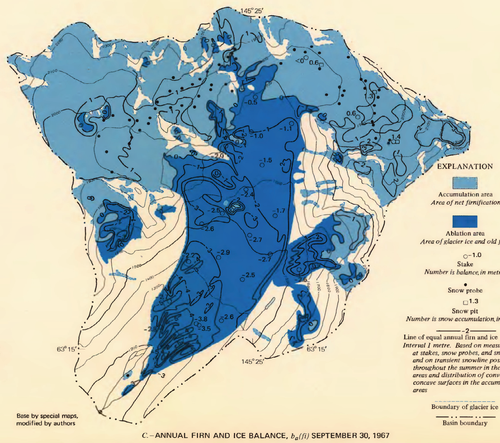

A.—INSTRUMENT LOCATIONS, SELECTED TRANSIENT SNOWLINES, AND FIRN LINES



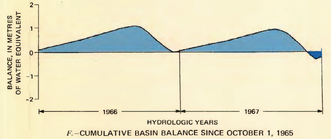

B.—MEASURED WINTER SNOW BALANCE, $b_m(s)$, APRIL 27, 1967

SCALE 1:40 000

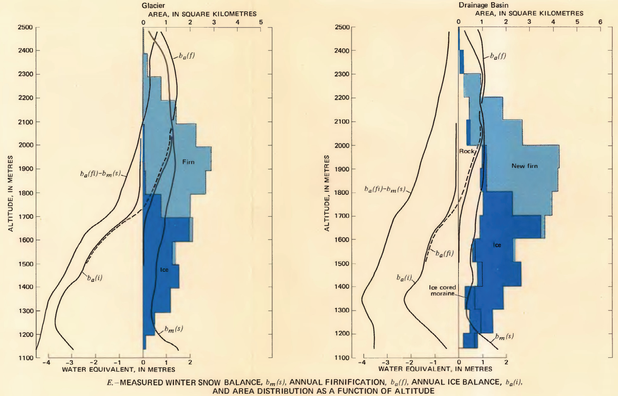
CONTOUR INTERVAL 100 METRES
DATUM IS PRE-1964 MEAN SEA LEVEL




C.—ANNUAL FIRN AND ICE BALANCE, $b_a(f)$ SEPTEMBER 30, 1967




F.—CUMULATIVE BASIN BALANCE SINCE OCTOBER 1, 1965




E.—MEASURED WINTER SNOW BALANCE, $b_m(s)$, ANNUAL FIRNIFICATION, $b_a(f)$, ANNUAL ICE BALANCE, $b_a(i)$, AND AREA DISTRIBUTION AS A FUNCTION OF ALTITUDE

# MAPS AND GRAPHS SHOWING DATA FOR 1967 HYDROLOGIC YEAR, GULKANA GLACIER, ALASKA RANGE, ALASKA