

3.4 OPERATIONS SUMMARY 1983-84 SEASON

THE 1983-84 SNOWFALL PATTERNS (FIGURE 1) GENERALLY REFLECT A WETTER THAN NORMAL YEAR WITH INTENSE PERIODS OF PRECIPITATION FOLLOWED BY EXTENDED RELATIVELY DRY CONDITIONS. AN EARLY SEASON SNOWFALL REMAINED ON NORTH TO NORTH EAST ASPECTS ABOVE 10000 FEET. THIS OLD SNOW BECAME A WEAK LAYER AND WITH A SERIES OF BACK TO BACK STORMS DURING NOVEMBER AND DECEMBER (FIGURE 2) RESULTED IN A MAJOR AVALANCHE CYCLE. SURFACE INSTABILITY DUE TO DENSITY INVERSIONS AND UPPER LEVEL TG WITH SOME DEEP SLAB INSTABILITY ON HIGH NORTHERLY ASPECTS WAS CHARACTERISTIC OF THIS PERIOD. PERIODS OF INTENSE PRECIPITATION IN FEBRUARY AND APRIL WITH UPPER LEVEL INSTABILITY FROM WIND TRANSPORT WAS AGAIN THE MAJOR SOURCE OF AVALANCHE ACTIVITY.

MOUNTAIN WEATHER AND AVALANCHE OBSERVATION WAS A MAJOR FORECAST CENTER ACTIVITY WITH OVER 8500 INDIVIDUAL OBSERVATIONS TAKEN. AUTO-DIALING AND DATA PROCESSING OF AUTOMATIC WEATHER STATIONS AT ALTA, SNOWBIRD AND SOLITUDE PROVIDED MORE TIMELY INFORMATION FOR THE FORECASTERS. A FAX TRANSMISSION WAS SET UP BETWEEN THE UTAH AVALANCHE FORECAST CENTER, (UAFC) SNOWBIRD AND ALTA DEPARTMENT OF TRANSPORTATION. THE EMPHASIS EMPHASIS ON AUTOMATIC DATA COLLECTION AND TRANSMISSION HAS IMPROVED THE QUALITY AND SPEED OF INFORMATION FLOW. ADDITIONAL AUTOMATIC WEATHER STATIONS ARE SCHEDULED FOR INSTALLATION IN 1984 AT SNOW BASIN AND PARK CITY. SNOW BASIN AND PARK CITY MAY ALSO BE INCLUDED IN THE FAX NET.

OVER 2000 FORECASTS AND 16 AVALANCHE WARNINGS WERE ISSUED DURING THE PERIOD FROM NOVEMBER 10 TO APRIL 30. PUBLIC FORECASTS WERE TERMINATED ON APRIL 30 ALTHOUGH BACKCOUNTRY USE. A PUBLIC INFORMATION CALL RATE OF 160 CALLS PER DAY AND HIGH BACKCOUNTRY USAGE INDICATES THE SEASON COULD RUN INTO MAY.

THE FORECAST CENTER ISSUED NINE PUBLIC AVALANCHE AND MOUNTAIN WEATHER, FORECASTS, TWO MORE DETAILED OBSERVER REPORTS, AND ONE COMPUTER ACCESS FORECAST DAILY. THE COMPUTER FORECAST WAS AVAILABLE TO SELECTED USERS ON AN EXPERIMENTAL BASIS AND WAS NOT INTENDED FOR PUBLIC USE. THE PUBLIC FORECAST OVER KPCW WAS WELL RECEIVED AND SUGGESTS A POSSIBLE INFORMATION CHANNEL BY WHICH THE FORECAST CAN BE DIRECTED AT BACKCOUNTRY USERS NOT CALLING THE PUBLIC PHONE. THE COMPUTER FORECAST HAS GREAT POTENTIAL FOR MAKING MORE DETAILED INFORMATION AVAILABLE TO USERS WITH TERMINALS SUCH AS SKI AREAS, RADIO AND TV STATIONS AND FOREST SERVICE OFFICES.

A TOTAL PUBLIC INFORMATION CALL RATE OF 54,325 IS SLIGHTLY HIGHER THAN THE PREVIOUS SEASON. THIS REFLECTS A SMALL DROP IN PUBLIC PHONE USAGE BUT A 22 PERCENT INCREASE IN THE USE OF THE OBSERVER PHONE. THIS PROBABLY REFLECTS AN INCREASED SOPHISTICATION OF THE USER AND A DEMAND FOR MORE DETAILED REPORTS FOUND ON THE OBSERVER PHONE. THE HIGHEST DAILY CALL RATE (671CALLS) OCCURED ON DECEMBER 26TH. A SUMMARY OF THE CALL RATE AND COMPARISON WITH THE 1982-83 SEASON FOLLOWS:

INFORMATION PHONE CALLS	1982-83	1983-84
SLC PUBLIC INFORMATION	40,355	39,647
SLC OBSERVER	4,357	5300
SLC TOTAL	44,712	44,947
OGDEN PUBLIC INFORMATION	3,671	4,076
PROVO PUBLIC INFORMATION	3,042	2,577
LOGAN PUBLIC INFORMATION	1,890	2,725
TOTAL UAFC FORECAST AREA CALLS	53,315	54,325

WHILE THE CALL RATE IS VERY STRONGLY RELATED TO THE SNOWFALL RATE THE GENERAL TREND OF THE TOTAL CALLS PER SEASON, AS SHOWN IN FIGURE 3, INDICATES WE ARE REACHING SOME CALLER LIMIT. ADDITIONAL PHONE LINES ARE NOW CONTEMPLATED FOR THE 1984-85 SEASON WHICH SHOULD HELP TO REDUCE CALL BACKUP NOW NOTICED DURING HIGH USAGE PERIODS. THE USE OF RADIO IN THE SALT LAKE CITY WITH A PROGRAM SUCH AS NOW BROADCAST OVER KPCW WOULD HELP TO REACH MANY OF THOSE WHO ARENT CALLING THE PUBLIC INFORMATION PHONES.

THE UAFC DEPENDS UPON VOLUNTEER REPORTS FOR MUCH OF THE INFORMATION RECEIVED FROM THE BACKCOUNTRY. SKI AREAS IN THE FORECAST AREA ARE THE MAJOR SOURCE OF WEATHER INFORMATION AND SOME BACKCOUNTRY SNOW DATA. THE REMAINDER OF THE SNOW DATA COMES FROM DIRECT OBSERVATION THROUGH BACKCOUNTRY TOURS AND SNOW PITS. VOLUNTEER REPORTS PROVIDED ALMOST TWO THIRDS OF THIS DATA. ONE HUNDRED SEVENTY FOUR BACKCOUNTRY REPORTS WERE RECEIVED FROM THE LOGAN RANGER DISTRICT, THE OGDEN RANGER DISTRICT, AND VOLUNTEER OBSERVERS. THIS INCLUDES BOTH AVALANCHE OCCURRENCE DATA AND SNOW DATA. THE AVALANCHE OCCURRENCE DATA FROM THE RANGER DISTRICTS WILL BE USED TO EVALUATE UAFC FORECAST ACCURACY.

WE RECEIVED 102 BACKCOUNTRY AVALANCHE REPORTS OF WHICH 24 INVOLVED SKIERS. THE EARLIEST ACCIDENT WAS REPORTED ON NOVEMBER 23, 1983 AND THE MOST RECENT ON APRIL 4TH 1984. THE ACCIDENT REPORTS SEEM TO SHOW A FAIRLY EVEN OCCURRENCE DISTRIBUTION OVER THE SEASON. FOUR OF THE MORE SERIOUS ACCIDENTS WERE INVESTIGATED AND REPORTED TO KNOX WILLIAMS. A MORE DETAILED ANALYSIS IS PLANNED TO SEE HOW THE ACCIDENT DATA CORRELATES WITH THE AVALANCHE FORECAST, GEOGRAPHIC DISTRIBUTION, SNOW CONDITIONS, ETC.

THE ONE FATALITY, WHICH WE HAVE INCLUDED IN THE BACKCOUNTRY SUMMARY, OCCURRED IN AN AVALANCHE CONTROLLED HIGHWAY AREA. THIS AREA HAS BEEN CLOSED TO BACKCOUNTRY USE ON AN INFORMAL BASIS. NO SIGN LINE SYSTEM EXISTS AND THE UAFC HAS PUT OUT WARNINGS. AT THE DIRECTION OF THE DOT FORECASTERS, AGAINST USERS ENTERING THE AREA. INCREASED PRESSURE BY THE PUBLIC TO USE THIS AREA MAY REQUIRE ADDITIONAL WARNINGS AND INFORMATION RELEASES THROUGH THE MEDIA. THE FORECAST CENTER WILL CONTINUE TO USE ITS FACILITIES FOR THIS PURPOSE ALTHOUGH THE AREA IS PROBABLY NOT BACKCOUNTRY IN THE NORMAL SENSE. REGULAR PUBLIC INFORMATION RELEASES TO THE MEDIA INVOLVING AREA CLOSURES OVER THE HIGHWAY AND ROAD CLOSURES COULD BE EASILY SET UP THROUGH THE FORECAST CENTER.

SEPT	<u>SNOWFALL</u>	<u>H2O</u>	SNOWFALL	H2O	<u>SNOWFALL</u>	<u>H2O</u>
			45	5.68		
OCT	24	3.67	70	8.51	12.5	3.38
NOV	73	10.34	66	6.75	143.5	13.79
DEC	164	15.09	165	12.95	244.5	25.45
JAN	85	7.39	75.5	7.58	42	3.75
FEB	143	10.48	68	8.02	104	7.66
MAR	184	18.65	150	13.42	85	7.93
APR	47	4.24	112.5	9.68	124.5	12.46
MAY	<u>65.5</u>	<u>9.99</u>	<u>78.5</u>	<u>9.38</u>	<u>*17</u>	<u>*2.68</u>
TOTALS	785.5	79.85	830.5	81.97	773	77.1

NOTE-ALL FIGURES ARE IN INCHES  
\*THESE FIGURES INCLUDE ONLY THE FIRST THREE DAYS OF MAY 1984

FIGURE 1



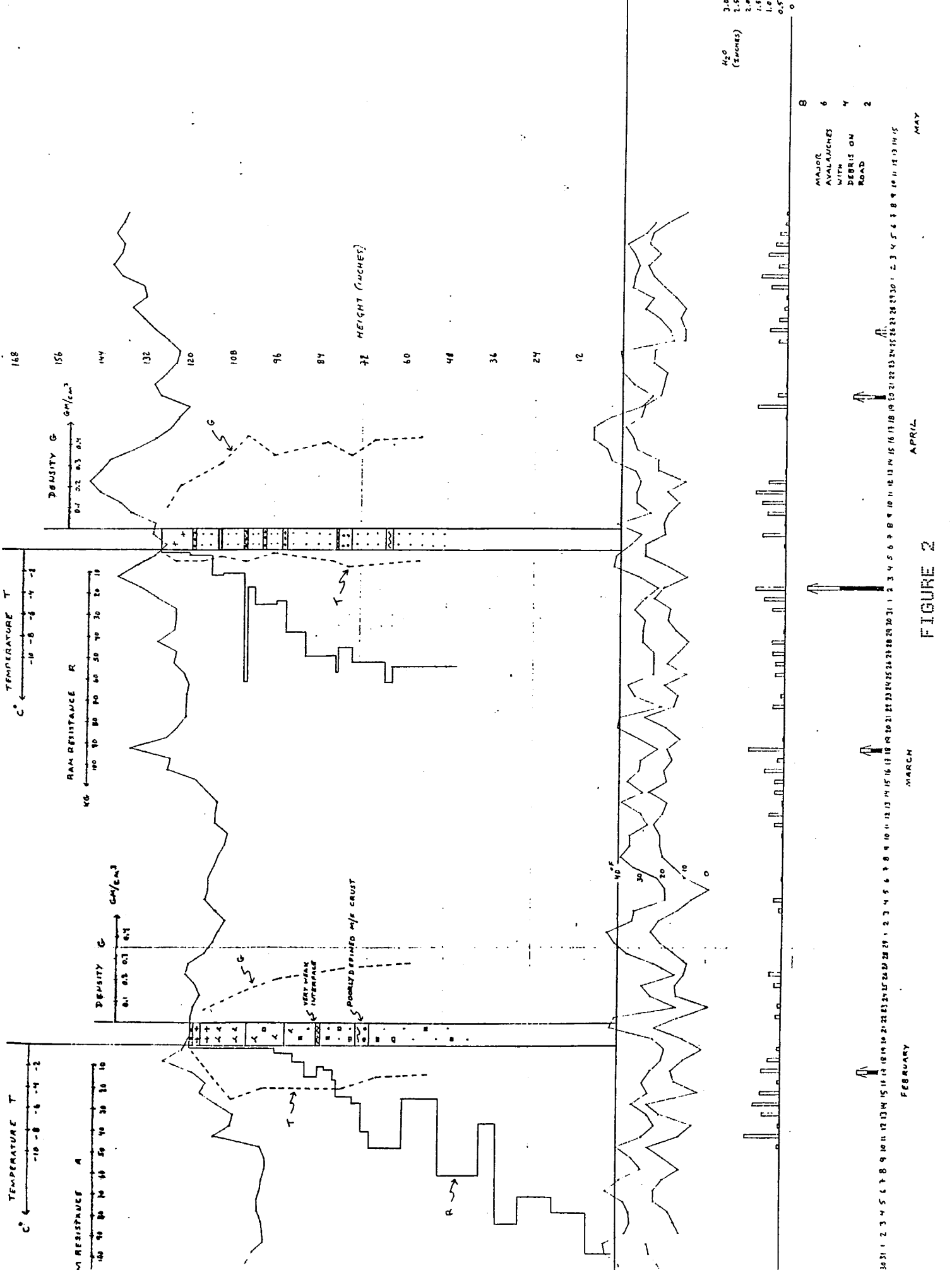
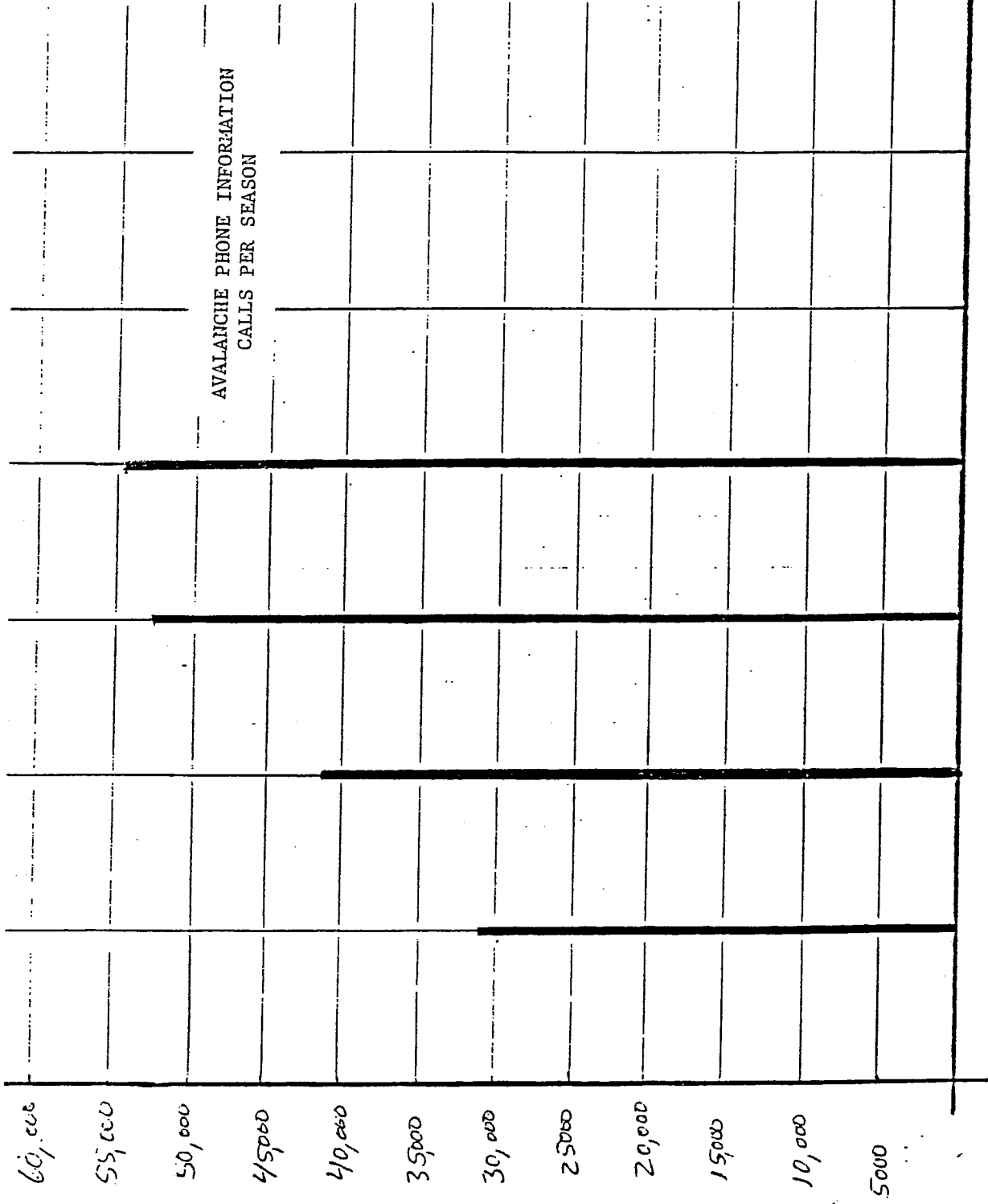


FIGURE 2



AVALANCHE PHONE INFORMATION  
CALLS PER SEASON

1980-81      1981-82      1982-83      1983-84  
 Nov.-Apr.    Nov.-May    Nov.-Apr.    Nov.-Apr.

FIGURE 3