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February 12, 1981

MR CHAIRMAN AND MEMBERS OF THE HOUSE STATE AFFAIRS COMMITTEE:

MY NAME IS BOB JANES, AND I AM REPRESENTING THE U.S. FOREST SERVICE TODAY IN SUPPORT OF H.B. 18.

THIS SUPPLEMENTAL APPROPRIATION BILL WOULD ENABLE PROCEEDING WITH THE PLANNED DEVELOPMENT AND OPERATION OF THE STATEWIDE AVALANCHE WARNING SYSTEM. IT PERTAINS TO THE STATUTE ENACTED BY THE SECOND SESSION OF THE ELEVENTH LEGISLATURE, NAMELY AS 18 CHAPTER 76, SEC. 18.76.010

(2) SPECIFYING THAT "THE STATEWIDE SYSTEM SHALL FORECAST SNOW AVALANCHE CONDITIONS THROUGHOUT THE STATE".

THE TWO OROGRAPHIC PRECIPITATION MODELS, ALSO COMMONLY REFERRED TO AS QUANTITATIVE PRECIPITATION FORECASTING MODELS, WOULD BECOME METEOROLOGICAL FORECASTING AIDS DESIGNED TO IMPROVE THE ACCURACY OF MOUNTAIN WEATHER FORECASTING. BASICALLY THEY WOULD HELP TO DETERMINE THE EFFECTS OF TOPOGRAPHY ON WINTER PRECIPITATION FOR SPECIFIED GEOGRAPHIC AREAS. THEY WOULD INVOLVE VARIOUS TIME PERIODS, WITH DIFFERENT WIND REGIMES, EMPLOYING UPPER AIR DATA AND A FINE-MESH TOPOGRAPHIC GRID.

THE OBJECTIVE IS TO PROVIDE A FAST, SIMPLE, AND ACCURATE TECHNIQUE TO FORECAST THE WATER EQUIVALENT OF THE NEW SNOWFALL FOR THE MOUNTAINOUS AREAS WHERE AVALANCHES START. SINCE LOADING OF THE AVALANCHE STARTING ZONES IS THE PRIMARY TRIGGER FOR NATURAL AVALANCHES, THE SNOWFALL FORECAST IS VITAL TO ACCURATE AVALANCHE FORECASTING. THE FORECAST TECHNIQUE SHOULD BE QUICK AND EASY TO USE BY METEOROLOGISTS WITH THE DATA AND EQUIPMENT NORMALLY AVAILABLE IN THE NATIONAL WEATHER SERVICE FORECAST OFFICES.

THE QUANTITATIVE PRECIPITATION FORECASTING MODELS WILL GIVE WATER EQUIVALENT OF SNOWFALL FOR TWO SPECIFIED GEOGRAPHICAL AREAS, ONE IN SOUTHCENTRAL AND ONE IN SOUTHEASTERN ALASKA. THE PRODUCT WILL NOT BE A PROTOTYPE. THE CONTRACTOR MUST SHOW THAT SIMILAR MODELS FOR OTHER GEOGRAPHIC AREAS MUST HAVE BEEN IN OPERATION FOR THREE OR MORE YEARS. THE MODELS AND THEIR OUTPUTS MUST BE SUBMITTED WITH THE BID AS AN INDICATION OF THE MODEL'S PERFORMANCE. A COMPARISON OF MODEL FORECASTS AND ACTUAL OBSERVED VALUES FOR BOTH SHORT TERM (1-24 HOUR) FORECASTS AND FOR THE SEASONAL ACCUMULATION MUST BE PROVIDED.

ONCE COMPLETED, THE ALASKAN QPF MODELS MUST BE CALIBRATED AGAINST EXISTING DATA. MODEL OUTPUTS WILL BE COMPARED TO SHORT-TERM (1-24 HOUR) SNOWFALL DATA FROM RECOGNIZED WEATHER MOUNTAIN STATIONS AND SEASONAL SNOWFALL WILL BE COMPARED TO SNOW COURSES.

THIS PROJECT PROPOSAL WAS PART OF THE FIRST-YEAR CAPITAL INVESTMENT IMPLEMENTATION PLAN FOR THE WARNING SYSTEM, HOWEVER FUNDING DID NOT MATERIALIZE TO ENABLE MEETING THE SCHEDULE. IT IS STILL A HIGH PRIORITY NEED. IF A CONTRACT CAN BE AWARDED WITHIN THE NEXT THREE MONTHS, THE FINAL CALIBRATED MODELS HAVE THE POTENTIAL OF BEING OPERATIONAL FOR THE WINTER SEASON OF 1982-83.

I WOULD BE GLAD TO ANSWER ANY QUESTIONS ABOUT THE OVERALL AVALANCHE WARNING SYSTEM, OR THIS SPECIFIC PORTION OF IT. THANK YOU FOR LISTENING.

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Presented by Robert C. Janes, Deputy Director for State and Private Forestry, U.S.D.A. Forest Service, Alaska Region, at a Hearing before the House State Affairs Committee on February 12, 1981.