



WATER RESOURCES RESEARCH GRANT PROPOSAL

Title: Completing the Idaho Climate Database

Focus Categories: CP, HYDROL 4. **Keywords:** Climate, Data Storage and Retrieval, Data Analysis, Climate Change, Climate History, Weather Data Collection, 19th Century

Duration: March 1, 1999 thru February 28, 2000

FY 1999 Federal Funds: \$13,931

FY 1999 Non-Federal Funds: \$17,072

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Congressional District: 1

Statement of Critical Problem

During the past several years, there has been an increasing reliance on older climate data to study a variety of problems. These range from the obvious (water rights adjudication, climate change, El Niño) to the less obvious (effect of weather variability on crop diseases, the spread of Yellow Star thistle, Salmon survival). The need for complete quality controlled data has become acute over the last year with many requests for complete datasets for analysis of El Niño and La Niña effects on many aspects of the Idaho economy.

The Idaho State Climate Services (ISCS) is being increasingly asked to either supply more complete datasets of better quality or to do actual analysis for some of these purposes. These data have been supplied in several forms but requests are now at least 50 percent via e-mail or the Web. Because users have come to expect data on the Web, I am now trying to move more data onto the Web page. To have a user obtain the data they desire via the Web is very efficient since they can obtain exactly what they want without describing the problem to an intermediary. The problem with doing this is that not all the data are available in electronic form and there is a cost associated with the Web programming. Users desire both complete data and easy access to that data, preferably on the Web, something impossible to provide at the present time.

Statement of Results and Benefits

The results of this project will be a complete Idaho climate database readily accessible to the public via the Internet and on CD-ROM. This will include all of the Cooperative Observer daily data that began in 1892. The elements include precipitation, temperature, pan evaporation and wind run, snowfall and snow-on-ground. Other elements may be

included if it appears that time and funds are available. In addition to the actual data, a station history is already finished and will be made available also together with an inventory of data sources. All original forms and maps in the State Climate Services office will be inventoried since the original forms often have much more information on them than would be obvious from digitized data. The benefits of having a long time series of data for various analyses cannot be overestimated. The variability inherent in long data series will make for better design of water resource projects and of all projects where climate data are needed. Agriculture will be able to analyze the crop yield and disease variability for better planning and expectations of the performance of new varieties and crops.

Nature, Scope and Objectives

The objective of this project is to develop a database of the daily Cooperative Climate Network containing all of the available daily data. This will document and preserve the data and information that will be of the most value to the state. This includes both paper and electronic records on the climate of the state.