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**“COLORADO CLIMATE”
A MAGAZINE DEDICATED TO APPLIED CLIMATOLOGY**

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1. INTRODUCTION

Shortly after the establishment of the Colorado Climate Center at Colorado State University in the mid 1970s, Colorado was experiencing worsening drought conditions. As the winter of 1976-77 began, practically no snow fell at all up through Christmas, and state government officials watched nervously as the state's winter recreation industry experienced a crushing depression. Under the leadership of Governor Richard Lamm, an emergency drought response task force was hastily organized which included the State Climatologist, Tom McKee. At that time, the Colorado Climate Center was just beginning to make inroads into accessing near real time temperature and precipitation data from all National Weather Service First Order and Cooperative weather stations in the state. But under the stress of the drought, the National Weather Service made special arrangements to speed up data access to the State Climatologist.

Beginning in January of 1977, the first monthly climate newsletter was prepared. It was very brief and included typewritten maps of monthly precipitation totals, percents of the long-term average, and temperature departures from average. A very short narrative accompanied the maps. Photocopies were then made from the original and sent to a variety of organizations and individuals with a particular interest in drought and water supplies. This was a free newsletter for the recipients. The distribution included selected federal and state officials, water managers and local Cooperative Extension directors. The value of a timely report on current climatic conditions was quickly recognized and the newsletter grew in popularity. Over the years, the mailing list expanded to include school districts, selected university faculty and administrators, and all National Weather Service weather observers. Many libraries were added to the list, and individuals wishing a free subscription were added if they had reasonable justification. By the 1980s, the distribution list exceeded 800.

The content of this newsletter also evolved over time. Day by day descriptions of weather patterns and significant events were added to help document progressions of weather patterns. During the early 1980s, energy shortages resulted in a large interest in heating degree days. Maps, tables and narrative were added to describe degree day characteristics and anomalies. Additional features on climate and energy were added to compliment the traditional emphasis on precipitation and water resources applications. Special features on a variety of topics were prepared. Some of these special features were excerpted by the Colorado State University Public Relations Department and sent out as statewide press releases. This publication became the number one means of communicating recent climatic conditions and also a means of sharing with weather observers and the general public the importance of climate in so many aspects of life.

For 25 years “Colorado Climate” was published as a complimentary monthly newsletter for distribution throughout the state and as a way of communicating to NWS weather observers the importance of their work. But in 1999 “Colorado Climate” was changed from a monthly publication to a bi-monthly edition simply to save on expenses and time. As the publication grew in size from only a few pages and only about 200 recipients to 12 pages and nearly 1,000 recipients, cost became an issue that could not be overlooked.

2. “COLORADO CLIMATE” – A NEW MAGAZINE

Following the retirement of Tom McKee in 1999, Roger Pielke, Sr. became the State Climatologist for Colorado. He had been a long-time reader of the “Colorado Climate” newsletter and an enthusiastic fan of the fascinating climate of Colorado. He raised the standards by making this the highest priority of the Colorado Climate Center and encouraged the transition to a magazine-style publication. Nolan Doesken was responsible for much of the content, while Odie Bliss took charge of layout, publication and subscription management.

The motivation for producing a state-focused climate magazine is to share the knowledge we have and are gaining about our climate with individuals and organizations whose lives and activities are affected by weather and climate. Through this publication, we

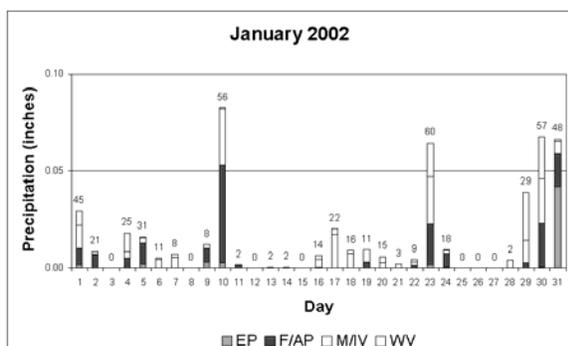
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hope to let others know about our fascinating climate and its diverse and complex impacts. This publication is also an effort to fill an apparent information gap that has been expanding in recent years. With so many articles about weather and climate in the media and so many sources of climate data and information on the Web, there would seem to be a glut of information. But very little of this information is presented in a manner that communicates to broad audiences the real sense of climate as a natural resource, and the opportunities to apply what we measure about our climate in ways that help us get the most out of our time and resources.

3. CONTENT

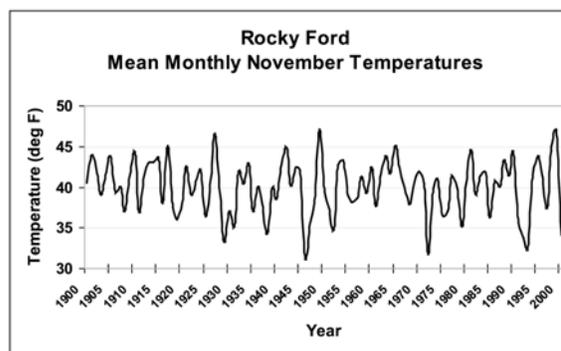
We have now published six editions of “Colorado Climate.” Each edition has been 24 pages of articles with no advertisements. There is some variation from issue to issue, but the basic content of the magazine consists of:

- ◆ Climate monitoring information consisting of text, graphs and maps of recent climate anomalies and events.



- ◆ One or more special features on a topic of interest or a summary of the results of current Colorado Climate Center research activities. For example, the first issue contained a description of the drought history of Colorado summarizing the results of 25-years of research on drought that Tom McKee completed during his career.
- ◆ Climate on the Web – this is an opportunity to showcase to readers Websites specializing in useful climate information.
- ◆ Climate for teachers – Teachers have a wealth of educational resources on weather and weather forecasting. In many ways, climate and the analysis of climate data is an even more effective way of engaging students in science. Each issue contains an article showing how teachers and their students can learn important concepts of math, science, history and even literature through the study of the climate of their own state.

- ◆ Folklore – this is just a fun, short section that digs into our history to remember the observational and forecasting tools of our ancestors. We try to briefly explain the underlying science or lack thereof that accompanied the old weather wisdom.
- ◆ Time series – In each issue we show one or more long-term time series of some aspect of our climate and discuss the source of the data, the need for consistency, and the significance of the results. There are no shortages of interesting time series to display, and readers often find these brief articles fascinating.



- ◆ History – Climatologists, by our vary nature and interests, are also historians in our own right. This section features climate events or episodes from the past where climate anomalies like blizzards, floods or the drought of the 1930s, changed our state or left permanent memories in the minds of those who lived through them. These articles are great fun to research and are very popular among some readers. But they can take a lot of work.
- ◆ Contributions from other climate experts – This is just now being developed. The Colorado Climate Center is not the only group interested in and conducting research related to the Climate of Colorado. There will be ongoing efforts to include contributions from other experts to broaden the content of the magazine.

4. WHAT WE HAVE LEARNED SO FAR

We are now nearly 3 years into this project and have produced only 6 issues of the “Colorado Climate.” Our goal was 4 issues each year. The reality is that it takes a lot of work to produce a good product and a lot of money. Web publication is cheaper and easier. However, the response to the publication has been very favorable. It is more tangible than webpages and is particularly appropriate for articles of historical interest.

Here are some realities of magazine-style publications, at least from our perspective:

- 1) It is costly. Even using limited color, the cost to produce a 24-page magazine is several thousand dollars per issue. This is a high unit cost if the distribution is limited.
- 2) Publication – quality photos take some effort to obtain.
- 3) You must produce a timely product – Web distribution makes more sense for many climate monitoring products.
- 4) People love a free publication, but when paid subscriptions were required, many previous subscribers quit.
- 5) Managing a list of paid subscribers is no small task. It requires the ability to process credit card payments and collect past due bills.
- 6) It requires marketing. Thousands of people don't just magically find you and give you money for your publication.
- 7) It may take several years to get to a break-even point.
- 8) It is a whole lot of work for a small staff, especially if that staff is also involved in many other projects and research.
- 9) It is not recommended for everyone – you need the will, the staff and the support of your parent organization.

If you can overcome these challenges however, and we're not quite there yet, it is extraordinarily satisfying. The number of favorable comments from all levels inside our university, from people throughout the state and from people from other states has been impressive. Getting the product out to the public with the limitation of the subscription fee is the challenge, but once the product reaches the audience they are appreciative and are delighted with the content. It is proving to be very effective outreach. The hardcopy publication also has a sense of importance and permanence that goes far beyond the impact of a transient webpage.

5. THE FUTURE OF “COLORADO CLIMATE”

This is no small task, but the Colorado Climate Center will strive to continue this publication and improve its' timely publication and distribution. It does place a burden of near-constant deadlines – a burden that journalists take in stride but scientists sometimes struggle with. Maintaining quality journalism is also a challenge. But this is a great opportunity to present applied climatology to the public in a state where the climate is a beloved natural resources.

To keep “Colorado Climate” alive and self-supporting, we will need about 2,000 paying subscribers in the near future. We currently are only producing 1,000 copies of each edition and we only

have a few hundred subscribers at this time. We have a challenge ahead of us, but the Colorado Climate Center is currently reprioritizing and changing staffing responsibilities to more successfully produce and distribute this unique product.

To view information about the “Colorado Climate” magazine go to: <http://ccc.atmos.colostate.edu>

6. ACKNOWLEDGEMENTS

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