



Snow Survey & Water Supply Forecasting Program

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NEWS RELEASE

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USDA AND UNIVERSITY OF NEVADA CELEBRATE 100 YEARS OF STUDYING SNOW AND FORECASTING STREAMFLOW

Users Very Satisfied With Snow Survey and Water Supply Forecasting Information

RENO, Nev., May 2, 2006—Agriculture Deputy Under Secretary for Natural Resources and Environment Merlyn Carlson today recognized 100 years of studying snow and forecasting streamflow by honoring the contributions of Dr. James E. Church, a University of Nevada, Reno professor.

Church pioneered the techniques the U.S. Department of Agriculture and others now use to measure snow and forecast seasonal water supplies for thousand of producers and millions of residents in the Western and Central United States.

"Snow is a primary source of water supply in the Western United States," said Carlson during remarks at a university reception to mark the snow survey centennial. "USDA plays a vital role in helping private landowners manage water and natural resources. This celebration recognizes the importance of the first steps taken to manage water 100 years ago, that today can supply up to 80 percent of the water resources across 12 western states."

Carlson presented University of Nevada, Reno Interim President Joe Crowley with a centennial plaque to celebrate Church's contributions to the USDA Natural Resources Conservation Service's (USDA-NRCS) Snow Survey and Water Supply Forecasting Program. The university will also receive two large outdoor plaques—one will be housed on campus and the second will be located at the Nevada Department

of Transportation's Visitors Center on the summit of Highway #27 between Reno and Incline Village. This site is located near a snow course that has been measured since 1910 and is near the Mount Rose mountaintop where Church conducted most of his snow sampling and climate research.

In 1906, USDA provided funds to the Nevada Agricultural Experiment Station for Church to establish an observatory on Mount Rose. He began his research on snow and weather conditions to aid agriculture, including frost prediction and the conditions that conserve snow until spring. In later years, he developed the equipment and procedures to predict runoff.

Church's seminal research launched the early beginnings of the current USDA-NRCS Snow Survey and Water Supply Forecasting Program. Since then, this federal, state and private cooperative program has helped water users obtain accurate water supply information. USDA-NRCS collects snowpack and related climatic information manually and through a sophisticated, automated system called SNOWpack TELEmetry, or SNOTEL.

Nevada is among 12 states that rely heavily on accumulated snow, or snowpack, in their mountain ranges in winter for water supplies in the spring and summer. The melting snowpacks produce the streams that flow from mountains in Alaska, Arizona, California, Colorado, Idaho, Montana, New Mexico, Nevada, Oregon, Utah, Washington and Wyoming. These streams serve as a major source of drinking water and hydropower generation and they sustain various economies, including agriculture and recreation. The melted snow that flows into reservoirs, lakes and rivers during spring can provide between 50 to 80 percent of the Western United States' water supplies during the spring and arid summer.

Water supply forecasting based on snow runoff is a powerful tool for reducing the devastating effects of flood and drought. Major sectors of the economy-agriculture, industry, recreation and government-in this region base their water management plans on the USDA-NRCS water supply forecasts.

In the Western United States, more than 25.5 million acres of irrigated agriculture, with a market value of \$51.1 billion, depend on snowpack information and water supply products provided by USDA-NRCS's Snow Survey and Water Supply Forecasting Program, according to the 2002 Agriculture Census.

In order to determine its effectiveness to users, USDA-NRCS conducted its first survey of this program in 2005 using the American Customer Satisfaction Index (ACSI). ACSI results showed the program received an overall score of 77 out of a possible 100. USDA-NRCS employees received an 88 for Customer Service, a component of the overall score. Other overall score components include usefulness, clarity and understandability of several web-based reports. One thousand users of the Web-based snow survey data and/or water supply forecasts were questioned.

Information about the snow survey centennial can be found at <http://www.wcc.nrcs.usda.gov/centennial.html>. Additional information about USDA-NRCS's Snow Survey and Water Supply Forecasting Program can be found at <http://www.wcc.nrcs.usda.gov>

The following photos were taken during the centennial celebration:



Ken Church, great grandson of Dr. James E. Church and Merlyn Carlson, Deputy Under Secretary for Natural Resources and Environment, USDA measure snow on Mt. Rose during the centennial event on May 2nd.



"The Study of Snow and Streamflow Forecasting Centennial" was held in Morrill Hall on the University of Nevada, Reno campus. Mr. Merlyn Carlson, Deputy Under Secretary for Natural Resources and Environment, USDA was the keynote speaker.



Plaque presented to University of Nevada, Reno to celebrate Church's contribution to the USDA-NRCS Snow Survey and Water Supply Forecasting Program.



Mt. Rose Ski Area SNOTEL site with Mt. Rose in the background...
...where it all started 100 years ago.