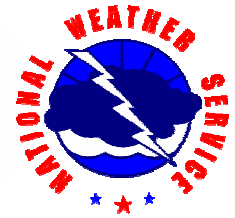


# High Country Observer



## What Will El Niño Bring to Wyoming?

By: Art Meunier, Lead Forecaster

A weak to moderate El Niño is forecast for this winter after observations have shown warmer than average sea surface temperatures in the eastern equatorial Pacific since last summer. So what will this mean for Wyoming? Strong El Niño episodes of the past have generally brought Wyoming drier and warmer-than-average conditions during the winter months (December-February). However, during the late spring months (April-June) the precipitation swings into the above average category, especially over northwest Wyoming. Since a weak to moderate El Niño is forecast for this coming winter and spring, we can expect this weaker

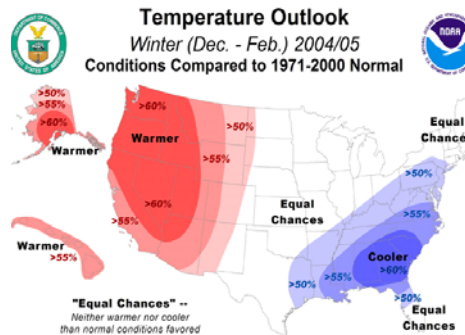


Figure 1 - Winter 2004/2005 Temperature

version of El Niño to have less impact of tilting those averages toward the extremes. The latest winter outlook for 2004-2005 (Figure 1) shows that western Wyoming, along with most of the western U.S., has the best chance of experiencing above average temperatures this winter. The eastern half of Wyoming is skewed less toward the warmer-than-average side. The winter 2004-2005 Outlook calls for equal chances of above or below normal precipitation across Wyoming (Figure 2).

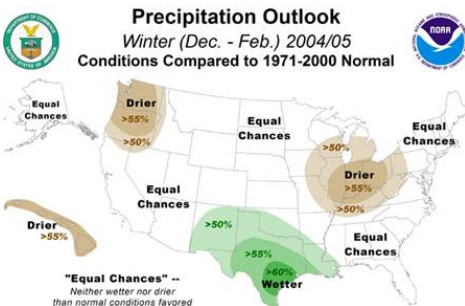


Figure 2 - Winter 2004/2005 Precipitation

## Star Valley Cooperative Observer Receives Award

By: Rich Miller, Hydrometeorologist Technician

On October 28, 2004, the National Weather Service recognized cooperative weather observer Ted Heiner, of Bedford Wyoming, for 23 years of dedicated service. Representatives from the Weather Forecast Office in Riverton presented Ted with the John Campanius Holm Award. This award is presented annually to 26 outstanding cooperative weather observers from around the country.

Ted's wife, Marilyn, was also recognized for her continued support of Ted's duties as weather observer and storm spotter.

Except for 3 years in the Air Force, Ted has lived in the Star Valley, for about 63 years. His grandfather was a settler in the Star Valley and was a justice of the peace. In fact, there are so many of his descendants living in the Bedford area, locals often refer to it as "Heinerville!"

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Happy  
Holidays  
from your  
National  
Weather  
Service!!!



## Star Valley Cooperative Observer Receives Award

*(continued from page 1)*

His Air Force career was spent in the Azores in the late 1950s, where the main mission dealt with refueling and rescue. His military career also involved some instruction in weather science, when he took navigator training.

Ted grew up on a farm in the Bedford area, and eventually took it over from his

dad. He raises beef cattle, alfalfa, barley, and potatoes.

Ted had formal schooling as a geologist. His lifelong career was as a high school math and science teacher. While he is now retired, he still is involved with young people. He is a boy scout counselor, and also teaches earth science to the scouts. The scouts come out to his house where he shows them the weather equipment, and how he observes and records his weather observations.

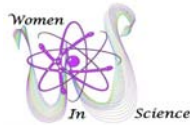
Ted also gives presentations of his responsibilities as a coop observer, to adults at community socials. He says most people don't realize that they have an official weather representative in the Star Valley.

Ted is devoted to the LDS church. He instructs single adult, and priesthood groups. He is also an assistant at the genealogy library in Afton.



Hydrometeorological Technician Rich Miller presents Ted and Marilyn Heiner with the prestigious Campanius Holm Award.

*“After an exciting afternoon, the group of ladies gathered once again in Robert A. Peck Arts Center Theatre for the closing ceremonies.”*



## A Recap of an Amazing Day

*By Katy Fitzpatrick, Meteorologist Intern*

On October 15, 2004, over 200 young women (grades 7-12) from across central Wyoming gathered at Central Wyoming College to affirm their love of science. The inaugural Women in Science Forum in Riverton allowed these young ladies to have access to female professional scientists, be motivated and supported in their love for science, and participate in interactive “Breakout Sessions.”

Several speakers addressed the group of young women, including Joe Sullivan of the National Weather Service in Riverton, Dr. Jo Anne McFarland, president of Central Wyoming College, Shari Meisel of DeVry University, and Dr. Maryanne Hannaney, who discussed what it takes to enter the

medical field, and her experiences with education in Iraq. After hearing from these speakers, several breakout sessions were available to the young ladies which allowed them to ask questions to people in fields which might be of interest to them. The main entry way to the forum was lined with booths from scientific and technological companies willing to show their support for women succeeding in scientific fields.

After an exciting afternoon, the group of ladies gathered once again in the Robert A. Peck Arts Center Theatre for the closing ceremonies. At this time, a plethora of door prizes was dispatched among the ladies. Prizes included five special scholarships for

*(continued on page 4)*



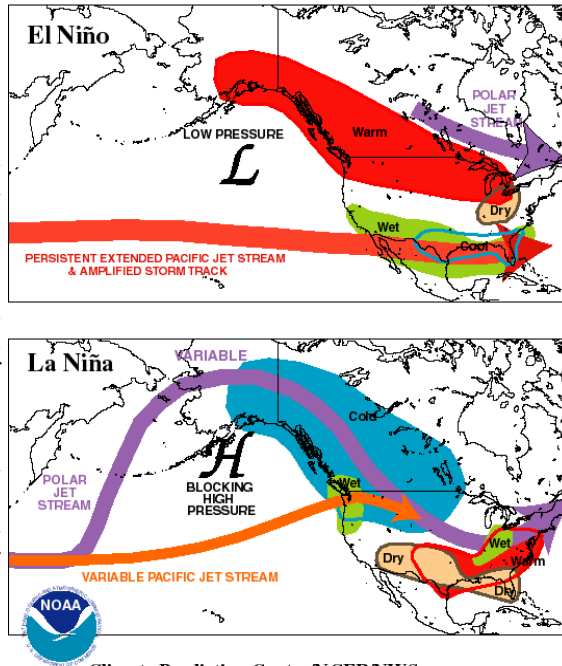
# What Will El Niño Bring to Wyoming? *(continued from page 1)*



## Why does an El Niño bring a warmer winter to Wyoming?

El Niño episodes are associated with four prominent changes in the wintertime atmospheric flow across the eastern North Pacific and North America. The first is an eastward extension and equatorward shift of the East Asian jet stream from the International Date Line to the southwestern United States. The second is a more west-to-east flow of jet stream winds than normal across the United States. The third is a southward shift of the storm track from the northern to the southern part of the United States. The fourth is a southward and eastward shift of the main region of cyclone formation to just west of California. This shift results in an exceptionally stormy winter and increased precipitation across California and the southern U.S., and less stormy conditions across the northern part of the country. Also, there is an enhanced flow of marine air into western North America, along with a reduced northerly flow of cold air from Canada to the United States. These conditions result in a milder than normal winter across the northern states and western Canada (Figure 3).

TYPICAL JANUARY-MARCH WEATHER ANOMALIES AND ATMOSPHERIC CIRCULATION DURING MODERATE TO STRONG EL NIÑO & LA NIÑA



Climate Prediction Center/NCEP/NWS  
Figure 3 - January - March Weather Anomalies

NWS Riverton will be broadcasting snowmobile and ski reports on NOAA Weather Radio this winter. Visit our website for a transmitter nearest you.

Actual basin temperature and precipitation rankings in eight El Niño years are shown in Figures 4 and 5, reflecting the typical El Niño pattern. The northern tier basins recorded the warmest and driest conditions,

especially across Montana. However, in the spring months, as El Niño conditions weaken, most of the western U.S. experiences wetter than normal conditions (Figure 6). These conditions would reflect a weakening of the Pacific jet stream and the transition to a trough of low pressure over the western U.S. and a ridge of high pressure over the eastern U.S.

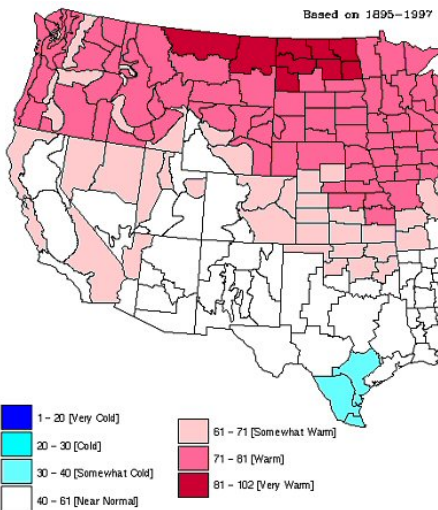


Figure 4 - Average Dec-Feb Temperature Ranking

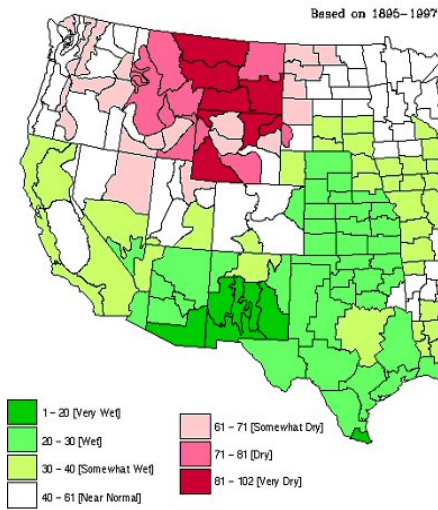


Figure 5 - Average Dec-Feb Precipitation Ranking

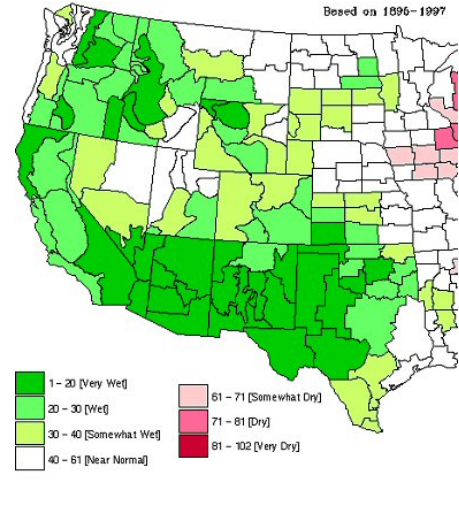


Figure 6 - Average Apr-Jun Precipitation Ranking



## WIS - A Recap of an Amazing Day *(continued from page 2)*

high school seniors, including three full-year scholarships for CWC and two additional scholarships from USA Funds.



National Weather Service Booths at the Women in Science Conference at Central Wyoming College.

## Rural Tensleep Resident Honored with Thomas Jefferson Award

*By: Ralph Estell, Data Acquisition Program Manager*



President Bush visits the National Hurricane Center during a very busy hurricane season. He praises Team NOAA for their “commitment” and “compassion.”

On October 19, 2004 the National Weather Service presented Mr. John Greet with the Thomas Jefferson Award, recognizing over 39 years of dedicated outstanding service in the Cooperative Weather Observer Program. The award was presented by the Riverton NWS Office’s Meteorologist in Charge Joe Sullivan, and Data Acquisition Program Manager Ralph Estell, at Mr. Greet’s ranch 17 miles south of Ten Sleep. The Jefferson Award is the agency’s most prestigious with only 11 presented this year among the most deserving volunteers of the 11,000 cooperative weather observers from around the country. The award is named after the third U.S. president, who was an avid weather observer and maintained an almost unbroken record of weather observations between 1776 and 1816.

Mr. Greet started taking weather observations in 1965, and has recorded over 14,000 daily reports of temperature and precipitation during that period. He has also served as a severe weather spotter

in the sparsely populated foothills of the Big-horn Mountains. His ever-present Wyoming “Can Do” spirit and dedication highlights his selection for this most exceptional award.



Data Acquisition Program Manager Ralph Estell presents John Greet with the prestigious Thomas Jefferson Award.

# Winter Storm Quiz



Fill in the blank with the correct words. Use these words:

- |                 |         |              |
|-----------------|---------|--------------|
| winter          | antenna | snowdrift    |
| carbon monoxide | watch   | mittens      |
| warning         | layers  | kitty litter |
| wind chill      |         |              |

1. A winter storm \_\_\_\_\_ means that there is a chance of heavy snow or a blizzard.
2. A winter storm \_\_\_\_\_ means severe winter weather is coming.
3. If a winter storm is expected you should have sand or \_\_\_\_\_ in your trunk in case your car gets stuck.
4. If a winter storm is expected, you should put a bright colored cloth on your \_\_\_\_\_ so someone can find you.
5. If you keep your car engine running to keep warm, you could die from \_\_\_\_\_ poisoning unless your windows are open to get fresh air.
6. If you go outside in severe weather, you will be warmer if you wear \_\_\_\_\_ of wool clothing.
7. \_\_\_\_\_ are warmer than gloves.
8. Snow storms and blizzards usually occur in \_\_\_\_\_.
9. The temperature your body feels when the actual temperature and wind are combined is called \_\_\_\_\_.
10. If you are driving during a blizzard, your car could be stalled in a huge \_\_\_\_\_.



- |                   |                    |
|-------------------|--------------------|
| Answers: 1. watch | 5. carbon monoxide |
| 2. warning        | 4. antenna         |
| 3. kitty litter   | 8. winter          |
| 7. mittens        | 9. wind chill      |
| 6. layers         | 10. snowdrift      |





## *NWS Riverton – Where Wyoming Weather Begins...*



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