



# Peak to Valley Weather

The Official Newsletter of the  
National Weather Service Grand Junction

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## Western Colorado-Eastern Utah SKYWARN® Spotters

Jim Pringle, Warning Coordination Meteorologist

Skywarn® spotters are the mobile version of the volunteer storm spotters for the National Weather Service. Additionally, the Skywarn® spotters use amateur radio for communications between themselves and also with the National Weather Service forecast office, occasionally reporting in from areas where amateur radio is the only form of communication.

In appreciation of this great volunteer service provided by the Skywarn® spotters, the National Weather Service hosts Skywarn Recognition Day (SRD) each year on the first Saturday of December. During the most recent SRD, about 20 Skywarn® spotters from Mesa, Delta, and Montrose Counties came to the Grand Junction NWS office to participate.

SRD allows Skywarn® participants an opportunity to communicate with other amateur radio operators throughout the world, while keeping track of those contacts that were made. At the end of the event, the amateur radio contacts are tallied by state, NWS forecast office, and total contacts (QSOs). Results of those communication contacts are then quality controlled for accurate counts. The final results are then posted on the [SRD website](#).

The most recent SRD was conducted at the Grand Junction NWS forecast office in honor of Ron Rich (KC0GKZ) who was the Delta County Skywarn coordinator for many years. Ron passed away in early 2012. [SRD results for the 2012 western Colorado Skywarn® spotters](#) included 3<sup>rd</sup> place for total contacts, 2<sup>nd</sup> place tie for the number of states contacted, and 4<sup>th</sup> place for the number of NWS forecast offices contacted. Thanks to all who participated!



Clockwise from left: Tom Dennis, Bill Eads, Royce Seymour, Richard Schultz, and Dana McCorkle

Photo: Grand Junction NWS



Photo: Grand Junction NWS



Left to Right: Al Acker and Jerry Fleck

Photo: Grand Junction NWS

## NWS Provides Decision Support During 2013 Winter X Games

Jim Pringle, Warning Coordination Meteorologist

GJT WFO forecasters provided weather support services for local government's Incident Command Team (ICT) during the Winter X Games that were conducted at the Buttermilk Ski Area near Aspen, Colorado, from January 24th to the 27th. During that time period, there was a mix of weather which impacted the venue and roadways for people traveling to and from the X Games. Although precipitation began in the form of rain, the snow level gradually lowered and two to five inches of new snow accumulations were reported in the area during the weekend of the Winter X Games.

In addition to providing a daily weather briefing for the X Games ICT, the Grand Junction NWS forecasters provided forecast updates and other coordination, including a spot weather forecast for a Search and Rescue request on a missing person report at the conclusion of the Winter X Games. Fortunately, the missing person was located safe and sound.



Photo:  
Grand Junction NWS

## Social Media: A Force to be Reckoned with for NWS

Travis Booth, Meteorological Intern

Are you familiar with the NWS Grand Junction social media presence? We originally jumped into the social media world during the spring of 2011 by opening a **Facebook** page, which was followed by a **Twitter** page, and just recently we began producing occasional weather briefings to place on our new office **YouTube** page.

Our main goal with all of this is to provide a supplemental channel to disseminate environmental information and promote weather awareness activities including outreach and educational efforts. We want to provide you with a "heads up" of pertinent weather information. The weather "heads up" will typically be the daily Graphicast as a way for you to plan your day or even the week ahead.

Additional information such as significant precipitation reports, climate data, weather education, Skywarn® training events, and interesting weather tidbits from both the local area and across the nation are also posted/tweeted. Our efforts to produce video weather briefings to place on our office YouTube page is just

beginning and will increase over time. But initially we expect to only make these briefings to deal with significant weather and provide educational material.



Additionally, we enjoy using our office social media pages as a way to interact with our users, allowing us to improve our services. Fans/Followers/Subscribers of our sites are encouraged to ask questions or write comments, post weather related pictures, and report significant weather.



Unfortunately, we may not be able to answer questions and comments at times due to significant weather, so we do appreciate your patience. Please note that we will be monitoring the page for weather reports or photos you may post!



If you would enjoy receiving our weather "heads up" messages and interacting with some of the office meteorologists, please "like", "follow", and "watch" us!

Click on the icons to jump to any of our social media pages!

# First Hot, Then Dry, Followed by Frigid!

John Kyle, Data Acquisition Program Manager

The summer of 2012 will go down in the record books as being the 3<sup>rd</sup> hottest summer on record for Grand Junction, as high pressure persisted over the area. The average high temperature for the three month period (June, July, August) was a balmy 93.7 degrees! Other places were even warmer; Moab checked in at 97.3 degrees. Gateway had its warmest summer ever, dating back to 1947.

As the heat of the summer finally diminished into pleasant fall temperatures, the precipitation was also diminutive for 2012. Many areas were well below normal for the year, and as a result, much of western Colorado and eastern Utah were under [drought conditions](#). Total precipitation for Grand Junction was about half of normal at only 4.53", the third driest ever. Other locations were even drier; Mexican Hat, Utah, only recorded 3.77" of moisture for the year. Steamboat Springs had one of its driest years ever, dating back to 1891!

Would normalcy return for the winter of 2012-13? Time would tell, and did. Abnormal remained the rule!

Very mild and even warm conditions were noted for many areas through November, into mid-December. In Grand Junction, temperatures were 'top ten' warmest ever, and there were newspaper articles warning of the thin ice on ponds and lakes. Mother Nature must have taken notice, as a dramatic change in the weather took place. A winter storm deposited several inches of snow across the region on December 19<sup>th</sup>, followed by below normal temperatures for the remainder of the month. In Fruita, CO, for example, temperatures in the latter half of December included highs around 20 degrees, with minimum temperatures as low as -13. Perhaps temperatures would moderate to start the New Year... They didn't.

A solid snowpack across the region was reinforced by bitterly cold arctic air for most of January, and in fact temperatures were significantly colder in January than December. Valley areas were particularly affected as inversions kept cold air in place. When a strong weather system would scrub out the cold stagnant valley air, it would be replaced by more cold arctic air. Mountain areas were more moderate, relatively speaking, and the front range of Colorado was actually quite mild; Boulder

for example had high temperatures in the 50s and 60s for half of the month.

The numbers bear it all. Grand Junction experienced its fifth coldest month ever in January, with an average temperature of 14.3 degrees! In nearby Fruita, temperatures dropped to below zero readings on 23 days, with an overnight low of -23 on the 14<sup>th</sup>. Speaking of the 14<sup>th</sup>, Maybell, CO, which holds the all-time record for the coldest temperature recorded in Colorado (-61 on 2/1/1985), came in at -40 degrees that morning! In northeast Utah in the Uintah Basin, low temperatures averaged -12 degrees for the month. Not to be outdone, Gunnison, which is typically a cold spot in Colorado, if not the U.S., averaged -15.4 degrees for January! On the bright (or warm) side of things, Cortez remained relatively unscathed as related to the severe cold. For January, the average high at Cortez was 38.2 degrees.

Temperatures finally moderated for the region in late January and February, as weather systems washed the cold air out of the valleys. Instead of another blast of cold arctic air, west and northwest air flows aloft kept temperatures nearer to normal (and even above normal in some instances) and thus feeling mild compared to the frigid January.

For those that were tired of the cold, they could take comfort in the fact that Grand Junction's average high temperature for February 28 is a toasty 51 degrees!



<b>Weather Awareness Events</b>		
<b>CLICK ON THE LINKS BELOW FOR MORE INFO</b>		
<b>Colorado</b>	<a href="#">Flood and Fire Awareness</a>	March 17 -23, 2013
	<a href="#">Severe Weather Awareness</a>	April 14 - 20, 2013
	<a href="#">Lightning Safety Preparedness</a>	Jun 23-29, 2013
<b>Utah</b>	<a href="#">Flood Safety Awareness</a>	Mar 18-22, 2013
	<a href="#">Lightning Safety Awareness</a>	Jun 23-29, 2013
<b>National</b>	<a href="#">Severe Weather Awareness</a>	Mar 3-9, 2013

**Be Prepared!**

# Mesa County Safety Fair - Greatly Appreciated by Our Kids!

Jim Pringle, Warning Coordination Meteorologist

The Grand Junction weather office joined 23 local entities on February 21st and 22nd at the Mesa Mall in promoting a wide range of safety information to our community. The forecast staff provided demonstrations and information during the annual Mesa County Safety Fair. While lightning activities and a packet of resources for teachers are interesting, the highlights always seem to revolve around tornado education; namely “tornadoes in a jar” and the tornado simulator. About 2400 2nd and 4th graders from the Grand Valley attended the two day event. The safety fair is coordinated by the Mesa County Safety Council.

[mesacountysafetycouncil.org](http://mesacountysafetycouncil.org)



NWS Booth at the 2013 Safety Fair held at Mesa Mall

Left: Jim Daniels (a.k.a Captain Lightning!) and Dea Bridge

Above (left to right): Travis Booth, Matt Aleksa, Jeff Colton

Photo: Grand Junction NWS

## Recording Rain Reports Relished!



Precipitation reports are an integral part of the NWS records. They help verify warnings, advisories and forecasts issued by meteorologists and serve as a comparison tool against radar data.

As soon as it looks like the chance for freezing temperatures will no longer occur, please set your **wedge rain gauge** back outside.



If you have a **4-inch cylindrical rain gauge**, insert the inner tube back inside the 4-inch cylinder and place the funnel back on the top.

*Thank you for your reports!*

## EDUCATIONAL RESOURCES

Click on the links below:

[JetStream - Online School for Weather](#)

### National Weather Service Publications:

One-stop shopping for electronic materials relating to [weather safety and awareness](#)

### NOAA Office of Education:

[Student Scholarship Opportunities](#)

### NOAA Education Resources

[The Weather Calculator](#) - Conversion formulas for temperature, wind chill and more!

[Weather Window](#) - [Cloud Identification and Weather Prediction](#)

[Web Weather for Kids](#) - [Cool Weather Stuff!](#)

[EDUCATOR OPPORTUNITY!](#)



## Grand Junction Weather Office Represented at 2013 Winter Weather Experiment

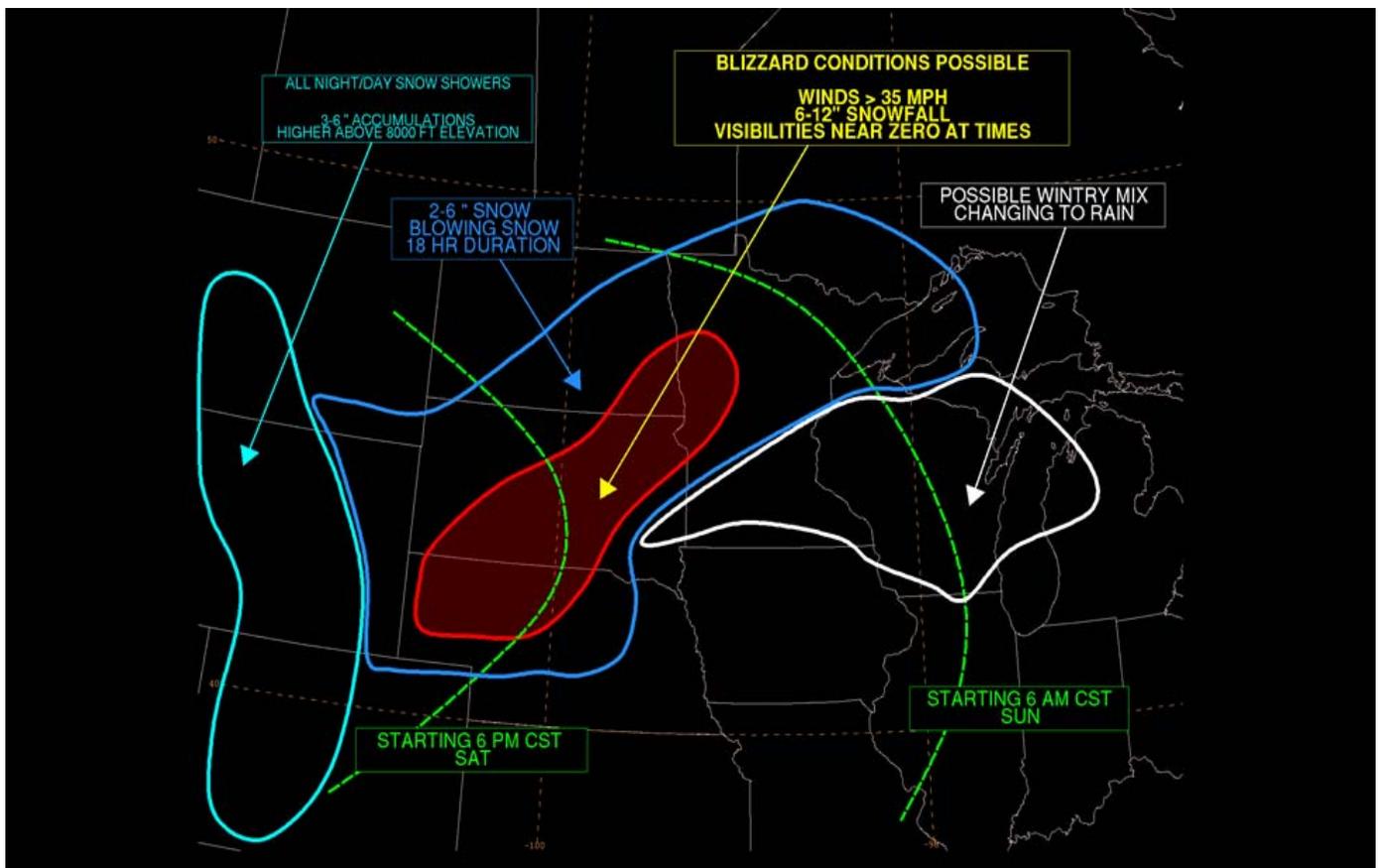
Paul Frisbie, Senior Meteorologist

The Weather Prediction Center (WPC), formerly the Hydrometeorological Prediction Center (HPC), located in College Park, Maryland, provides graphical, gridded, and text guidance to the field offices, like NWS Grand Junction, for pending winter weather events. In an effort to improve forecasts, WPC conducted experiments to enhance guidance information. The 2013 Winter Weather Experiment explored methods to quantify and communicate uncertainty through the use of various forecast datasets. WPC partnered with the Weather for Emergency Management Decision Support team to explore how to more effectively communicate complex winter weather information to non-meteorological decision makers. Paul Frisbie, a senior meteorologist with the NWS Grand Junction Forecast office, was selected to spend the week at WPC participating in this experiment.

Each day, participants selected a region of the country that provided the biggest decision support challenge, like significant snowfall or freezing rain. Forecast datasets were examined and new snowfall algorithm techniques were evaluated to generate a public forecast graphic. A mock decision support briefing to emergency managers was conducted. The graphic provided was to focus **where** the winter weather event will occur, **when** the event will occur, and **what** specific hazards will be associated with the event.

On 8 February 2013, a storm moving across the central Rockies was expected to spread into the northern and central Plains. The following graphic was generated to illustrate the “*where, when, and what*” of this particular event.

The ultimate goal of this experiment was to improve winter weather forecasting skills and provide effective communication to decision makers. This ranges from snow removal, avalanche mitigation, or a school district declaring a “snow day”.

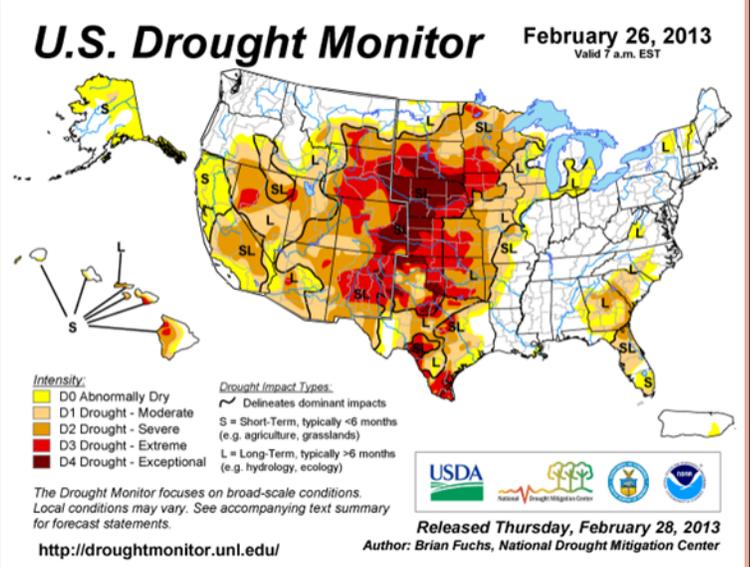


# Drought Outlook for Spring / Summer 2013

Joe Ramey, Meteorologist

After a stormy and wet December across eastern Utah and western Colorado, January and February overall snowfall was below normal. By early March 2013, Colorado snowpack was at 76% of average, lower than in March 2012. Eastern Utah reported similar conditions with northeast Utah at 79% of average and southeast Utah at 88%.

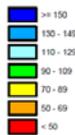
Looking out to the state of the Pacific, especially the neutral El Niño Southern Oscillation, this spring should offer up average to above average precipitation for the region. However, even a very wet spring has little chance of catching the region's snowpack back up to near normal. Therefore, moderate to extreme drought is expected to continue into the warm season.



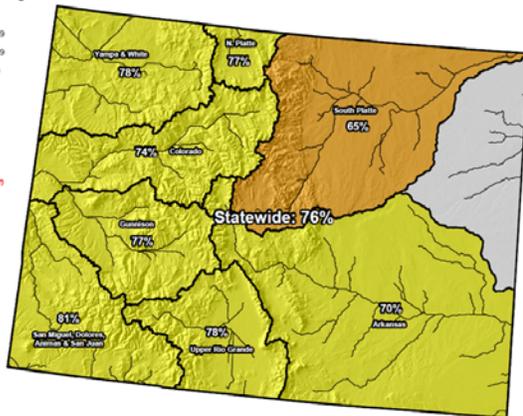
## Moderate to Extreme Drought exits over eastern Utah and western Colorado

Colorado SNOTEL Snowpack Update Map

Percent of Average



Provisional Data  
Subject to Revision



## Snowpack percent of average for Colorado river basins, as of March 4, 2013

## Snowfall monthly averages for seven mountain cooperative observer sites in Steamboat Springs, Winter Park, Breckenridge, Aspen Crested Butte, Telluride, and Silverton

Snowfall at Seven Colorado Mountain Valleys

