

# WRITERS OF THE STORM

WFO PUEBLO / SOUTHEAST COLORADO NEWS

## VOLUME 6

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JUNE - DECEMBER 2015

### ***Safety Spot:***

- \* **Drive safely, rest often.**
- \* **Are you Winter-ready?**
- \* **Carry extra food/clothes in your vehicle in case you get stuck.**
- \* **Snow and wind can close roads quickly.  
Know the local conditions.**
- \* **Know before you go..  
Check the enroute weather**

The winter season is upon us and as we reflect on the warm days of late fall, we remember how destructive fall and winter weather can be. The National Weather Service office in Pueblo continues with outreach visits, partnership meetings, cooperative observer and climate station visits along with travel to our neighboring NWS offices for coordination meetings and training. Are you prepared for winter snows and cold outbreaks?

As you think of the upcoming colder months and what they could hold in store, don't forget to grab an extra blanket for the car, mittens and hats for the kids, and a warm coat—just in case. While you are at it, make sure your pets have a warm, dry spot to hang out with fresh water to drink. Stay hydrated and dry, and safely enjoy what winter has to offer.

### **A note from the Meteorologist In Charge...**

I am often amazed at the expertise of the staff in the NWS office in Pueblo, CO. Their talents and interests range from GIS to photography, from hiking and skiing to long range climate and weather forecasting, from cooking and baking to computers and technology. Most of all, I am always amazed at the absolute dedication of the staff here. They work rotating shifts, holidays and weekends, long hours troubleshooting equipment, issuing severe weather warnings, and providing support during hazardous weather events and wildfires. It is a humbling experience to lead the local office staff who always strive to provide the best service to our customers and partners, the media, and local government agencies.

# DataStreme Atmosphere Science Class

( <http://www.ametsoc.org/amsedu/DataStremeFrames.html>  
Education)

DataStreme Atmosphere is a major precollege teacher enhancement initiative of the American Meteorological Society with the main goal of training of Weather Education Resource Teachers who will promote the teaching of science, mathematics and technology using weather as a vehicle, across the K-12 curriculum in their home school districts. The 13-week course is offered twice a year to selected participants. It focuses on the study of the atmospheric environment through the use of electronically transmitted weather data and learning materials combined with Study Guide readings and investigations. Teachers are mentored by a Local Implementation Team (LIT) consisting of at least one master precollege teacher and most include one professional meteorologist.



In Pueblo, the Local Training Team consists of Paul Wolyn (Science and Operations Officer) and Makoto Moore (Incident Meteorologist/General Forecaster). Paul and Makoto have been working with the current participants for 13 weeks, culminating in a tour of the National Weather

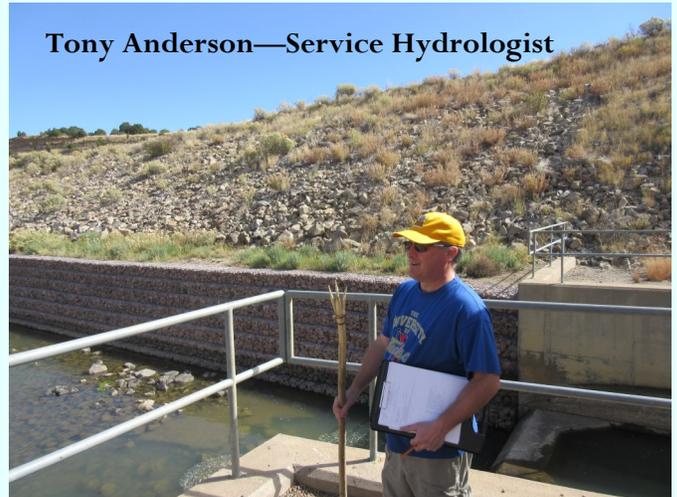
er Service Office and a small celebration of completion.

Congratulations to the participants of the Class of 2015. We all wish you the best of luck in your future career path.

For anyone interested in participating in the class of 2016; instructions on applying and contact information can be found at: <http://www.ametsoc.org/amsedu/dstreme/extras/leaders.html>.

# ***Service Hydrology - What does it mean?***

Last issue we introduced our new Service Hydrologist – Tony Anderson - to the public. One of the biggest questions was: What does a Service Hydrologist do? He is the water specialist for the office and as part of his duties, he spends considerable time in the field visiting stream gaging stations and looking at stream channels as part of an ongoing monitoring program of the National Weather Service.



Tony Anderson—Service Hydrologist

The National Weather Service (NWS) hydrology program is built around a set of specific forecast points along rivers and streams. Most of these forecast points are monitored by equipment serviced and maintained by other federal, state, or local agencies. The data is delivered to the NWS and becomes part of the river flood warning and forecasting process. The Service Hydrologists are on the front line of that process and are responsible for making sure the information provided to the public is accurate and up to date.



Larry Walrod—MET  
Debris filled 5.5ft Culvert

Generally, conditions at the gages are relatively stable and keeping the E-19s (location and data forms) current is a straightforward process. Rivers do change though, particularly after storms or periods of high stream flows and the E-19s need to be updated on a regular basis. Updates also needed when there are large flood events or changes in the underlying conditions, changes in channel condition, land use along the river, or a change in the equipment used to monitor the river. The upside

to this process is that the Service Hydrologist and staff at the WFO get to get outside and visit the gages and to see the rivers firsthand. This year, Tony was joined by Larry Walrod (MET), Kyle Mozley (MET) Eric Petersen (MET), Mark Wankowski (MET) and Stan Rose (MET) on his excursions. In a profession that encourages scientific certainty, there is still no more important resource than firsthand experience with the river. The second part involves a trip to the field to take measurements and make observations. This second stage is otherwise known as “the fun part.”

A standard field visit includes a review of all the information in the E-19 that describes conditions at the site and along the river and comparing it to those observed in the field. Surveying equipment is used to measure recorded benchmarks, the river bed, and the stages associated with inundation of various areas.



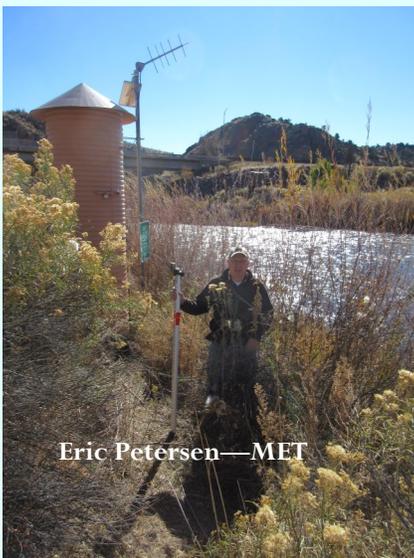
Eric Petersen—MET

# Service Hydrology - Cont.

Field trips to the gages can be an interesting and “fun” experience. Gages are sometimes located in areas of rugged terrain, while others are located in areas of questionable safety, all of which can make it challenging just getting to the equipment. To add to the challenge, using high-precision instruments to get accurate records of the data is even more difficult when there are strong winds or extreme weather conditions, which happens quite frequently in Colorado! Field trips are usually reserved for quiet



weather days.



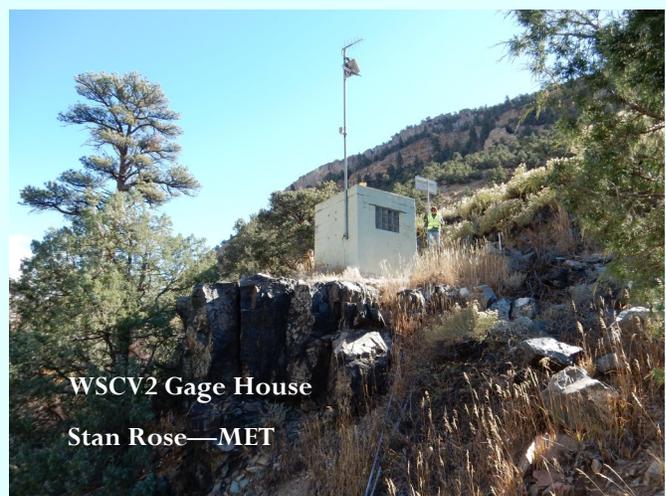
Eric Petersen—MET

Frequently the E-19 contains information that relates the river stage at the gage to some impact or potential damage that is miles away. In these cases, the hydrologist must extrapolate between the conditions at the gage and the conditions at areas well up or downstream. Furthermore, the extrapolation is generally made when the river is running low, while the described conditions are usually quite high. This is when the science of hydrology becomes something of an art. The hydrologist must rely on reports from people who know the river and its impacts, high water marks from recent floods, knowledge of river behavior, and a lot of map-reading.

The end result of the E-19 update is increased confidence in river behavior for both the hydrologist and the forecaster. It gives the NWS the confidence that the data they provide to the public is accurate and helpful, which ultimately assists the public in making good decisions regarding their safety and economic well-being.



Mark Wankowski—MET



WSCV2 Gage House  
Stan Rose—MET

# Getting to know you....

## Administrative Assistant



### Meet Denise—

Denise joined the National Weather Service in 1993, when WFO Pueblo opened its doors. She said she will never forget that day, seeing the AFOS system hauled into the office by two men in a truck.

Denise's federal career started in 1984 at the Denver Federal Center with the Bureau of Land Management as a Data Transcriber. She moved back to Avondale (her hometown) working for the Department of Defense at the Pueblo Depot Activity in the Safety and Environmental Office under a term appointment, before accepting a job with the National Weather Service.

In addition to keeping the entire office functional and moving in the same direction, she provides a full range of management support services for the office, establishes standards for correspondence control and processing procedures; assists with budget tracking, purchasing and procurement of supplies and hardware. In addition to all of that, she also schedules and maintains all our travel, makes sure we get to and from our destination without problem, gets our IMET to his short fused missions and in general keeps us on track.

### *Some words from Denise about herself:*

“I was born and raised from Avondale, CO and moved away for a short period of time. I went to elementary and middle school locally and graduated from Pueblo County High School just a few miles away from our office. My hobbies include fishing, camping, softball, volleyball, football and motorcycle riding. I also have 5 grandchildren that I love and adore with every heartbeat in my body. I'm a busy grandma running from softball games, soccer games to basketball games to be their number 1 fan. I just recently purchased a motorcycle of my own and am still learning the fun and free spirit ride on two wheels. I am a fan of football and bleed orange and blue for my Denver Broncos. As the years have flown by and the "eligibility of retirement" draws near, I can only think how could this be that I am that age already!”

Denise is the first person you see when you enter, and the last one you speak to when you leave, in addition to being the voice on the phone that guides you to the correct person. Her bubbly, professional attitude sets the tone for the entire office. She says the favorite part of her job is dealing with the public and staff.

# CARE AND SHARE FOOD DRIVE A HUGE SUCCESS!

The 6th Annual Care and Share Food Drive was another big success for WFO Pueblo.

Two Weather Forecast Offices in Colorado, located in Pueblo and Boulder, and one office in Goodland, Kansas have participated in the Holiday Food Drive. To make it a little more interesting, a friendly competition is held between the 3 offices to see who can collect the largest amount, in terms of pounds donated.

This year—bragging rights goes to Goodland, where the staff collected a whopping 703 pounds of food. Pueblo came in second at 504 pounds and Boulder at 276 pounds. In total: a staggering 1483 pounds of food were donated. To put it into perspective: the 504 pounds of food that WFO Pueblo collected was donated to the Care and Share food bank and will feed 240 families. The food collected from all 3 offices will feed over 700 families.

In the past 2 years, WFO Pueblo has donated over 1300 pounds of food; enough to feed over 600 families!!! Way to go Pueblo!! Congratulations to Goodland, Pueblo and Boulder on another successful year!



# National Bike Challenge Winners

## Team NWS Pueblo !!

The National Bike Challenge is a nationwide event uniting thousands of current bicyclists — and encouraging countless new riders. It is a free and easy way to challenge yourself, your colleagues and your community to ride along with the fun of competing on a local, state and national level. This year, the Challenge was able to unite 92,621 riders, who pedaled over 37 million miles from May 1, 2015 until September 30, 2015.

Team WFO Pueblo took that challenge — and logged 314 commuter miles through the season, saving 278 pounds of CO<sub>2</sub>, which resulted in the team winning the:

### **SMALL BUSINESS COMMUTER CUP 2015 award!!**

The website for the National Bike Challenge allows you to log your miles on a daily basis, save routes and the mileage for ease of logging, and in return computes how many accumulated calories you have burned, how much money you save on gasoline and also how many pounds of CO<sub>2</sub> you save, simply by riding your bicycle.



There are a few things you will need, to make your ride safer: a bike helmet, a front light, a flashing red back light, a water bottle, and if you are riding in the dark, a safety vest for higher visibility. You can add additional items to fit your needs once you have figured out your ride.

Most people have said if they had someone to ride with, they would ride more, so here is your chance to dust off the bike, get out there and have some fun. You can register just yourself, or the whole family. It's a great family event that everyone can be involved in! To keep it fun, try setting family goals, personal goals or just see how far/fast you can go.

Your bike doesn't have to be fancy. You don't need special clothes (just a helmet and safety vest). You don't have to be fast. Many used bikes are in great shape and can be found on websites, flea markets and in the classifieds. Maps of your bicycle trails can also be found online or at your local bike shop. I strongly recommend you get one, and see how your world opens up.

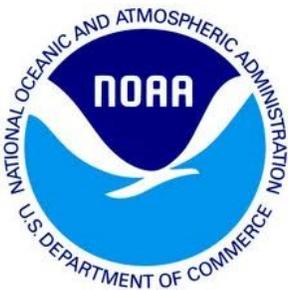


In addition to the healthy aspect of riding, it is just plain fun! Colorado is a popular place to ride and has made lots of safe accommodations for those who are want to get out and try it.

If you are really adventurous, you could ride the Trans-America Bike route, or the Continental Divide trail. Check out what trails and routes are available in your area. Ask your co-workers if they ride. You could be surprised what you find out about your local area.

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## What is the difference between a Winter Storm Warning, Watch and Advisory; issued by the National Weather Service?

- **Winter Storm Watch: Be Prepared:** A watch is issued when hazardous winter weather conditions may develop in a particular area. There is still some uncertainty whether that hazardous weather will occur in that area. You should start making preparations for yourself; gathering supplies such as food, firewood, etc. You should also check in on older family members or friends to make sure they are aware winter hazards may occur.
- **Winter Storm/Blizzard Warning: Take Action!** A warning is issued when a winter storm is imminent or occurring. Consider travel before the warning goes into effect, or postpone travel. If you are home, bring in pets and plan to stay inside until it is safe to travel again. Winter storms and blizzards, along with extreme windchills can quickly become deadly
- **Winter Weather Advisory:** Winter weather is expected to cause hazardous conditions. When caution is used, these conditions often are not life-threatening.

Here are some more key terms to understand:

- **Freezing Rain:** Rain that freezes when it hits the ground; creating a coating of ice on roads, walkways, trees and power lines.
- **Sleet:** Rain that turns to ice pellets before reaching the ground. Sleet also causes moisture on roads to freeze and become slippery.
- **Wind Chill:** A measure of how cold people feel due to the combined effect of wind and cold temperatures; the Wind Chill Index is based on the rate of heat loss from exposed skin. Both cold temperatures and wind remove heat from the body; as the wind speed increases during cold conditions, a body loses heat more quickly. Eventually, the internal body temperature also falls and hypothermia can develop. Animals also feel the effects of wind chill; but inanimate objects, such as vehicles and buildings, do not.

Stay up to date with your winter weather at:  
**WEATHER.GOV/PUB**