

Shareholders Report

2019

Welcome to the fourth annual Shareholders Report. The purpose of this report is to highlight specific activities your local National Weather Service office was engaged in during 2019 as a part of our core mission and desire to provide high quality weather information and education. The National Weather Service values its relationship with its core partners and the communities it serves, and we want to continue to enhance our products and services to meet your needs.

National Weather Service Grand Junction

FROM THE DESK OF THE METEOROLOGIST IN CHARGE

BEN MOYER, METEOROLOGIST-IN-CHARGE

Welcome to the 4th edition of National Weather Service (NWS) Grand Junction's Shareholder's Report. The fiscal year 2019 national budget for the NWS was 1.1 billion dollars, which amounts to about \$3.35 in tax dollars per person. The purpose of this report is to showcase work your local NWS office employees completed this past year that served you and your communities. Weather plays a part in everyone's daily life and has many implications on the decisions you and your organizations make. The NWS values its relationship with its core partners and the communities it serves and we want to continue to enhance our products and services to meet your needs. Much of our forecast information is seen via our website (www.weather.gov/gjt), social media and specific partner decision support briefings. However, a lot more goes on behind the scenes and through our personal interactions with partners, the media and local communities. This report will highlight specific activities your local NWS office was engaged in during 2019 as a part of our core mission and desire to provide high quality weather information and education. These activities also helped save lives and property, improve decision-making, and benefit organizational budget and resource planning.

In 2019, we hired a new Warning Coordination Meteorologist (WCM), Jeff Colton. He has worked for our office for over 20 years and is very knowledgeable about the impacts weather has on our region. He is also an Incident Meteorologist (IMET) and has provided weather decision-making support and forecasts to core partners on-site for numerous wildfires in the United States, was part of a program assisting with decision support forecasts for the Australian Meteorological agency, and has provided briefings on-site for large outdoor events such as the Winter X Games. His primary job will be to help build our relationships with partners like you.

In 2020, our office's top priorities are:

- To hold an Integrated Warning Team (IWT) Workshop focused on winter weather
- To provide meteorologists on-site at your large outdoor event public safety command centers
- Improve relationships and communications with you all through the Weather Ready Nation (WRN) Ambassador program
- Conduct scientific studies and have one published in a national publication

Please contact our office if you would like to schedule a tour, need specific decision support services (DSS), have ideas on how we can better serve you, or would like us to be involved in any of your activities.

A big thank you to Matthew Aleksa, Meteorologist at NWS Grand Junction, for compiling this report and delivering it to you. I appreciate his effort to solicit input from our staff and arrange it in a meaningful way.

Sincerely,

Ben Moyer, Meteorologist-In-Charge (MIC)

Cover photo and article header photo provided by Kris Sanders, Lead Meteorologist at NWS Grand Junction

MIXING UP THE OFFICE

JEFF COLTON, WARNING COORDINATION METEOROLOGIST AND INCIDENT METEOROLOGIST

There was a little shuffling of team members at the Grand Junction Forecast Office in 2019. We had a few departures and on-station promotions. The year started off with the retirement of our Warning Coordination Meteorologist, Jim Pringle, followed by the departure of one of our forecasters, Jimmy Fowler, who moved on to



Image 1: Debris left behind from March 2019 avalanches over Red Mountain Pass, filling in the basin next to the Snow Shed on Highway 550. Credit: Matthew Aleksa (NWS)

Houston, Texas to get closer to his passion for tropical weather. We also saw one of our Electronics Technicians, David Schwemlein get promoted to the Electronic Systems Analyst position in Duluth, Minnesota. Then we saw the retirement of a long-time Lead Forecaster and Fire Weather Meteorologist, Chris Cuoco.

So with the departures, we had some backfilling to do. Several old faces moved up into new positions on station. During the year 2019, Lead Forecaster Jeff Colton was promoted to the Warning Coordination Meteorologist and Dennis Phillips and Michael Charnick were selected to fill the two vacant Lead Forecaster positions. This left us with one vacant Electronics Technician position and four vacant meteorologist positions towards the end of 2019, set to be filled for 2020.



Image 2: 40 to 60 feet of snow brought down from avalanche mitigation over Highway 550 in March 2019 over Red Mountain Pass, filling the Snow Shed on Highway 550. Credit: CAIC/CDOT

NWS GRAND JUNCTION 2019 IMPACT-BASED DECISION SUPPORT SERVICES AND SITUATION REPORTS

MEGAN STACKHOUSE, METEOROLOGIST

From the Winter X-Games to the Grand Junction Airshow, or the GoPro Mountain Games to Country Jam, the NWS Office in Grand Junction, Colorado provided critical weather support for our partners in 2019. The office supported 34 events during the calendar year, in addition to the frequent fire weather, HAZMAT, search and rescue, hydrologic, and general weather support Grand Junction provided on a daily basis. Once again, the months of June, July and August were the busiest with 10, 11, and 8 events supported each month, respectively. Many of these events were large public outdoor events with some exceeding a daily attendance of 10,000 or more people. Several events took place over multiple days or even once a month.

Support was provided in the form of daily weather briefings, slide decks, spot forecasts, conference calls, and on-site operations at Incident Command Posts (ICPs). One of the Grand Junction Office's biggest weather partners is the Colorado Department of Transportation (CDOT). Particularly during the winter months, CDOT needs to know the weather forecast for the state in order to make preparations for maintaining the roads and making important calls on any potential closures. Whenever an impactful storm is projected to hit the state, the Grand Junction Office will work with the Boulder and Pueblo Forecast Offices to prepare a slide deck and participate in a conference call with CDOT and other partners. Finally, with any event support, our meteorologists always remained vigilant back at the forecast office and frequently provided impromptu weather briefings to the Incident Management Team (IMT) whenever hazardous weather approached the venue.

The NWS in Grand Junction provided 157 total days of Impact-Based Decision Support Services (iDSS) to our partners. This consisted of 235 total briefings, spot forecasts, conference calls and more. Additionally, 23 Situation Reports were issued throughout the year, most of which focused on an impending winter storm, critical fire weather conditions or bitterly cold temperatures affecting the Halloween Holiday.

Situation Reports are a relatively new product, first rolling out in 2018. The NWS in Grand Junction, along with other forecast offices in Central Region, can utilize the Situation Report to better communicate iDSS information to core partners, including emergency management, as well as the public. The Situation Report can serve as a "tap on the shoulder" to prompt core partners of critical weather several days in advance. The product is intended to be clear, concise and consistent to best relay important weather information. More information about the Situation Report can be found [here](#). An example of one can be seen in Image 1 to the right. If you would like to provide feedback on this product, please fill out the following survey [link](#).

National Weather Service
Grand Junction, Colorado
Wednesday, February 13, 2019 8:52 AM

Situation Report

Series of Storms to Bring Wet, Heavy Mountain Snow

Forecast Snowfall

Valid Ending Friday February 15th, 2019 at 11 AM MST

Forecast Snowfall through Friday Morning

The first wave tonight will provide better snow accumulations to the northern and central mountains.

The second wave Thursday night will favor the southern mountains.

Summary/Key Points:

✓ **Snowfall Through Friday Morning:**

- 8 to 16 inches for the N/Central CO Mountains
- 6 to 12 inches for the Gore, Elk and San Juan Mountains
- 4 to 8 inches for the Uncompahgre Plateau, Roan and Tavaputs Plateau in W CO and the E Uintas, La Sal, Abajos, and Tavaputs Plateau in E UT
- Numerous winter highlights in effect check www.weather.gov/gjt for details

Important Forecast Changes

NEW Initial issuance

[Click for a description of this product](#) [Click to evaluate this product](#)

Image 1: Example of a Situation Report issued on February 13, 2019

NWS GRAND JUNCTION HOSTS SECOND INTEGRATED WARNING TEAM WORKSHOP

MEGAN STACKHOUSE, METEOROLOGIST

After six months of intensive planning and collaboration, the NWS in Grand Junction held its second Integrated Warning Team (IWT) workshop on April 18, 2019. The 2019 workshop focused on the Evolution and Impacts of the Drought, Wildfires, and Post-Fire Flash Floods of 2018 across eastern Utah and western Colorado. The 2017-2018 water year was the driest on record for Utah, and the second driest on record for Colorado, thanks in large part to the dismal winter snowpack and the incredibly weak monsoon season. Additionally, the Exceptional (D4) drought plagued the Four Corners region beginning in April 2018 before finally being eradicated in February 2019. Numerous wildfires lit up the western slope, including the 416 Wildfire which went on to become the 6th largest wildfire in Colorado history. The 416 Fire burn scar, combined with numerous others, would go on to be a prime target for debris flows during subsequent heavy rain events.

The IWT brought in close to 40 external partners representing numerous agencies with forecasting, response and communication responsibilities across eastern Utah and western Colorado, including individuals from the Bureau of Land Management (BLM), US Forest Service (USFS), Colorado Climate Center, fire departments, public works, emergency management and more! The mission of the IWT was not only to discuss the challenging 2018 season, but to also allow the participating agencies to learn about one another's needs and how to increase collaboration in order to better protect lives and property.



Benjamin Moyer, MIC at NWS Grand Junction, kicked the IWT Workshop off with introductions. He was followed by Russ Schumacher, Colorado State Climatologist, who explained the evolution and impacts of the 2018 Four Corners Drought. Subsequent presentations included causes and results of the 2018 fire season from the Great Basin Coordination Center while NOAA's Storm Prediction Center described their Fire Weather Program. San Juan National Forest personnel then talked about 416 Fire Operations. The morning wrapped up with a panel session on operations during and after a fire with representatives from the Sheriff's Office, Colorado State Emergency Management, USFS and NWS serving as panelists. In the afternoon, presentations were given by NWS meteorologists Michael Charnick, who discussed operational data at the NWS during wildfire events, and



Matthew Aleksa, who described his experiences issuing flash flooding products during significant debris flows from previous wildfires. The lead coordinator on the Advanced Radar Research Center's (ARRC) PX-1000 experiment then presented remotely from Norman, Oklahoma on the PX-1000's deployment to the 416 Fire last summer. The remainder of the workshop included a 2019 fire season outlook presented by Grand Junction IMET Jeff Colton, a walkthrough of the NWS Grand Junction website, and a second panel discussion which focused on droughts, fires, and post-fire flash floods.

The second IWT for eastern Utah and western Colorado was a resounding success for all those involved and the Grand Junction office is already making plans for the next workshop in 2020.

ONSITE HYDRO-METEOROLOGICAL IDSS FOR HINSDALE COUNTY AND LAKE CITY, COLORADO

ALDIS STRAUTINS. SERVICE HYDROLOGIST

Record March snowfall in the Henson Creek and upper Lake Fork and Cotton Wood Creek Basins, all tributaries to the Gunnison River, contributed to large scale and numerous avalanches. The debris from the avalanches on many occasions filled portions of the upper parts of the drainages. Due to the debris in the waterways, the potential for flooding increased substantially along and downstream in Lake City due to snow melt.

On May 6, 2019 Colorado Governor Jared Polis declared an emergency due to potential flood issues that could impact Lake City. On May 7, 2019 Hinsdale County declared a local emergency. Hinsdale County's emergency management assembled a team of local, state, and federal entities (Unified Coordination Group) to help in the planning for and mitigation of the flood risk for Lake City. Services Hydrologist responded to provide onsite support to the Unified Coordination Group (UCG).

The Service Hydrologist, Aldis Strautins, dispatched twice for onsite, multi-day support and made many day trips to the UCG. Initially he provided expert guidance for establishing trigger points for flood warnings in addition to both forecasts for daily operations and outlooks for the spring runoff season. After the USGS installed two new gauges on Henson Creek, the Service Hydrologist went back to Hinsdale County and identified new trigger points related to the new gauges. He set up internal monitoring and triggers for warning and alert operations for the staff at the



Image 1: Klondike Avalanche Slide about 5.8 miles upstream from Lake City covered Henson Creek for 620 feet

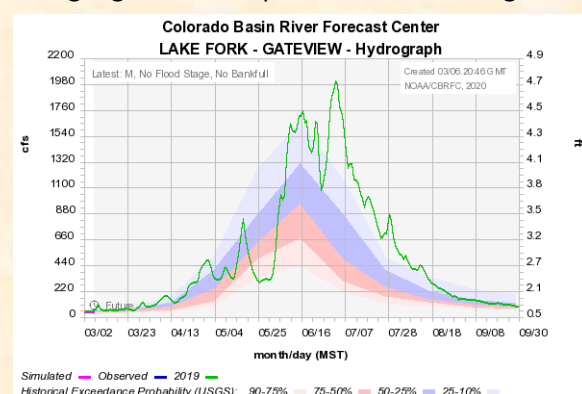


Image 2: Hydrograph of Lake Fork on Henson Creek showing observed and forecasted river levels for the Lake City area from CBRFC

Grand Junction office of the National Weather Service. Additionally, the Service Hydrologist requested specialized river forecasts for the Lake City area from the Colorado River Basin Forecast Center (CBRFC) [see image 2]. Coordination was also done with Hinsdale County and Gunnison County Emergency Management for transmission of warnings, watches and alerts to reach the affected region and appropriate entities and public.

Even when not onsite, support continued throughout the spring melt season which was extended by four to six weeks beyond normal due to an abnormal cool spring and early summer.

Later in the year Mr. Strautins was involved in an after action workshop to provide feedback on what worked well during the deployment of the UCG and what could be improved.

DECISION SUPPORT SERVICES DURING THE 2019 NEAR RECORD SNOWMELT SEASON

ALDIS STRAUTINS, SERVICE HYDROLOGIST

The fall of the 2019 water year (October 1, 2018 through September 30, 2019) was on the dry side. Besides a wet beginning to early October, the rest of October and November were below normal precipitation. Snow pack was near to just slightly above normal by the middle of February. The last part of February through the first part

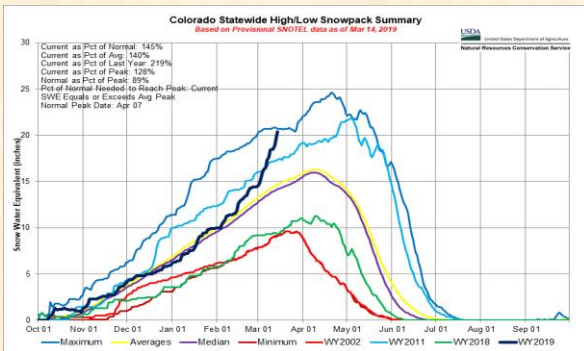


Image 1: Graph of Colorado Statewide High/Low Snowpack Summary showing WY2019 compared to previous years, max, min and average snowpack

of March changed that significantly. Well above normal precipitation occurred for the end of February and March with some areas reaching above period of record values for snow water equivalent (SWE) during the months of February and March. With the abundant snowpack there was potential for flooding during the spring melt runoff season.

Service Hydrologist Aldis Strautins started to provide an

early outlook in the middle of March and then in early April. As the season progressed, weekly outlooks and webinars were started for the Western Slope of Colorado emergency management community and other state and local entities. These more broad decision support briefings lasted into late June due to the prolonged cool and wet early summer. Where the risk of flooding was greatest, additional more localized presentations and decision support services were provided at the county level. Northeastern Utah also had potential for flooding due to higher than normal snowpack and received more focused briefings for decision support during late May into June.

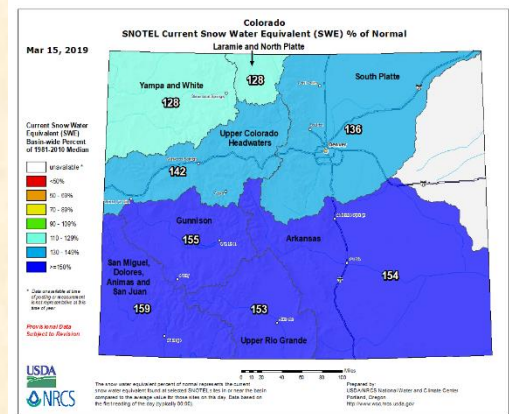


Image 2: SNOTEL percent of normal SWE values for the major basins in Colorado

River levels remained high late into the mid-summer period for both Northeastern Utah and Western Colorado before quickly dropping down to base flow levels in July. The Grand Junction National Weather Service Office

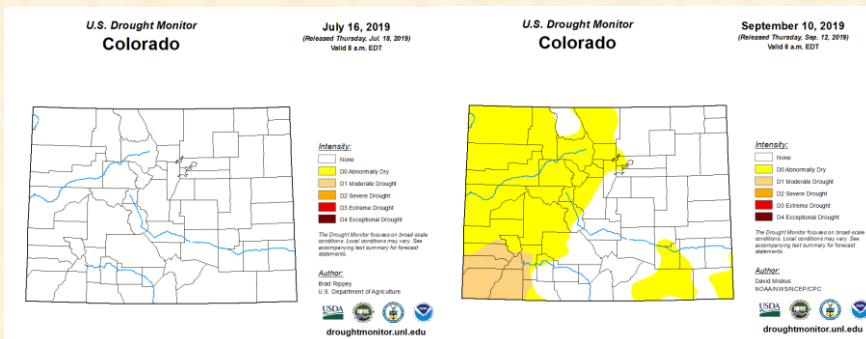


Image 3: Drought Monitor quickly moving from no drought in mid-July (left) to moderate drought in the Four Corners region by mid-September (right)

then pivoted to provide expert recommendations for the Drought Monitor through the NIDIS Intermountain West drought early warning system. The service hydrologist also provided local and regional water managers information on the quick change to dry and low water conditions to make better decisions during this transition period.

2019 FIRE WEATHER SEASON IN REVIEW

JEFF COLTON, WARNING COORDINATION METEOROLOGIST AND INCIDENT METEOROLOGIST

An above normal snowpack brought a late start to the fire weather season across Eastern Utah and Western Colorado. In fact, snow fell on the first day of summer across most of the Colorado Rockies with cold temperatures and rain down into the valleys. However, significant drying and a lack of monsoonal moisture later in the summer and into the fall, resulted in several days of critical fire weather conditions that persisted into mid-October.

Numerous wildfires were reported, although the severity of the fires were down from those experienced one year ago. Even with a somewhat “down” year, the forecast office remained extremely busy as it once again eclipsed the 900

spot weather forecasts (issued for wildfires, prescribed burns, search and rescue missions and HAZMAT situations) mark (923), which ranked 3rd in the nation compared to all NWS Offices.



Image 1: Agricultural burn east of Fruita, CO on July 2019. Credit: Jeff Colton



Image 2: Agricultural burn east of Fruita, CO on July 2019.
Credit: Jeff Colton



Image 3: Agricultural burn east of Fruita, CO on July 2019.
Credit: Jeff Colton

NOTABLE WEATHER STORIES OF 2019

MICHAEL CHARNICK, LEAD METEOROLOGIST

2019 did not see too many major weather events, but there were several weather stories nonetheless. The big story coming out of winter 2019 was the lingering snow pack across much of southwestern Colorado. Concern was high regarding the potential for a big runoff season. Fortunately, the snow pack melted at a slow and steady pace and was not enhanced by any major weather systems. The large amount of water released into the ground delayed the fire season, and a wet late spring into early summer helped suppress wildfire activity throughout much of the year. What a difference a year makes, compared to 2018 that saw extreme drought, much lower snowpack, and an active fire season. The captioned image depicts the differences between the 2018 and 2019 snow water equivalent throughout the west. Note the differences in Colorado and Utah!

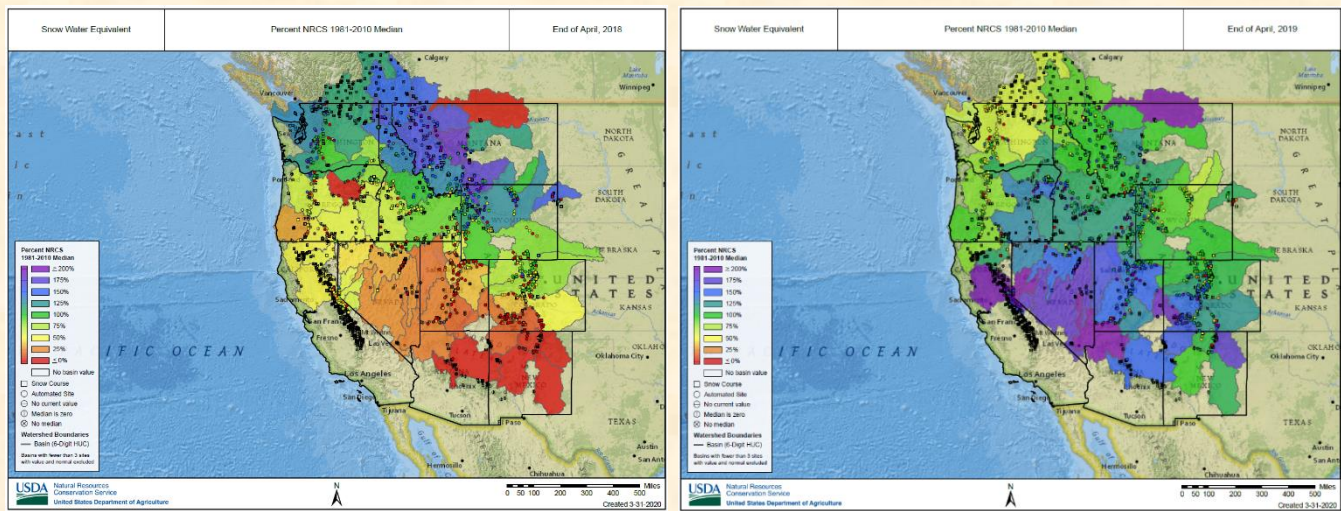


Image 1: Comparison between snow water equivalent in the Rockies on May 1st 2018 (left) versus May 1st 2019 (right)

The monsoon season in 2019 was also notably suppressed this year across eastern Utah and western Colorado. However, the early fall period did feature a few strong thunderstorm events across the western slope. The most notable of these occurred on September 8th. A severe thunderstorm raced across the I-70 corridor near Rifle, producing a 76 mph wind gust at the airport weather station! From a scientific perspective, this thunderstorm had classic radar signatures associated with strong winds - some that are fairly uncommon to see in the Grand Junction CWA. A "backward C echo", outlining the gust front of highest winds, was observed by meteorologists. These echoes were co-located with Doppler radar estimated velocities over 70 mph. Fortunately, only minimal reports of damage were received from this event.

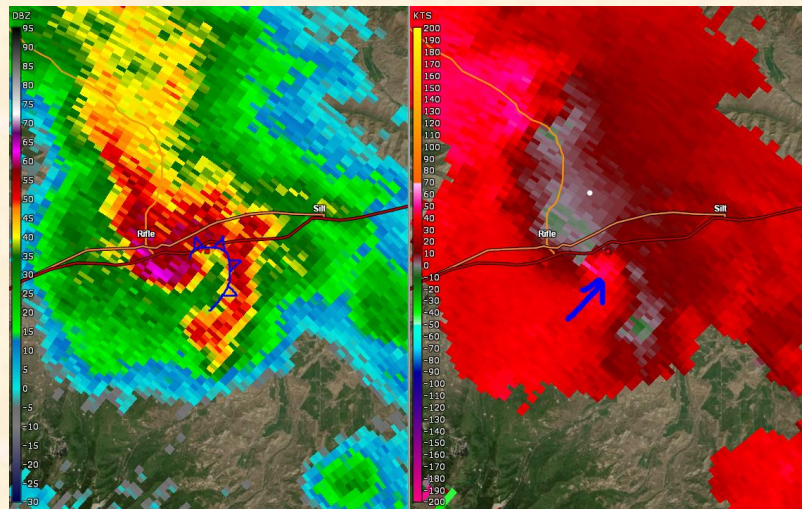


Image 2: A severe thunderstorm moves over Rifle airport (red dot) on September 8th, 2019. The strong "gust front" on radar is highlighted by the blue front on the left image (radar reflectivity). On the right (velocity), strong wind speeds detected by the radar are moving over the airport.

UPPER AIR PROGRAM AT WFO GRAND JUNCTION

JOHN KYLE, DATA ACQUISITION PROGRAM MANAGER

Since May of 1944, the National Weather Service in Grand Junction has taken upper air observations with radiosondes. The radiosonde is an expendable instrument package just smaller than a shoe box that is suspended below a large balloon inflated with hydrogen gas. As the radiosonde rises at a rate of 1,000 feet per minute, sensors on the radiosonde transmit pressure, temperature, relative humidity and GPS position data each second, along with GPS-derived wind speed and direction.

How are radiosonde data used?

Radiosondes are the primary source of data that are ingested into supercomputers for weather prediction models, with output that forecasters adjust for accuracy as needed. These supercomputers run at speeds of 8.4 quadrillion operations per second! Occasionally, when severe weather is expected, additional soundings may be taken in support of the area threatened. For example, the NWS in Grand Junction has done additional soundings in support of Hurricane Irene and Superstorm Sandy. Other radiosonde data applications include air pollution and fire weather models.

From helium to hydrogen

This past year, our office transitioned from using helium gas as the balloon transporter to hydrogen. The change was necessitated by a nationwide shortage of helium and subsequent higher cost associated with its use. In August, the office commissioned the Hydrogen Inflation Safety System (HISS). The proprietary HISS uses a unique set of specialized equipment to provide the safest handling of hydrogen available. While hydrogen is a combustible gas, this safety system is designed specifically for hydrogen balloon use, enabling the hydrogen to be handled safely by NWS staff and in compliance with local fire codes.



Image 1: Bank A and bank B cages that housed the hydrogen tanks and delivered hydrogen gas safely from the outside of the inflation shelter to the inside using the HISS. Credit: John Kyle



Image 2: Inside the inflation shelter showing the redesigned upper air configuration using the HISS. Backup helium option to the right of the image with ability to switch back and forth between hydrogen and helium safely. Credit: John Kyle

UPPER AIR PROGRAM AT WFO GRAND JUNCTION (CONTINUED)

JOHN KYLE, DATA ACQUISITION PROGRAM MANAGER

The details

These sensors are linked to a battery powered radio transmitter that sends the sensor measurements to a sensitive ground tracking antenna on a radio frequency, typically ranging from 1676 to 1682 MHz. Observations where winds aloft are also obtained from radiosondes are called "rawinsonde" observations. The radio signals received by the tracking antenna are converted to meteorological values and from these data significant levels are selected by a computer, put into a special code form, and then transmitted to data users. High vertical resolution flight data, among other data, are also archived and sent to NOAA's National Center for Environmental Information (NCEI).

A typical NWS "weather balloon" sounding can last about two hours. In that time, the radiosonde can ascend to an altitude of 110,000 feet, and be transported horizontally more than 180 miles in strong winds. The radiosonde is suspended about 100 feet below the balloon to minimize contamination of the temperature

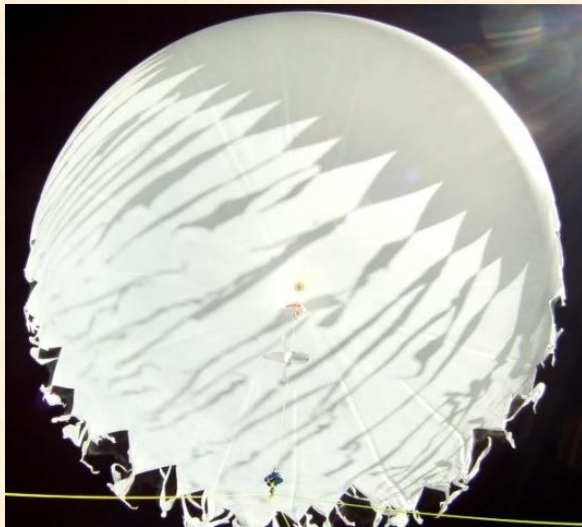


Image 3: Weather balloon the moment before it bursts.
Credit: homestead.com

measurements from heat shedding off the balloon skin. During the flight, the radiosonde is exposed to temperatures as cold as -90°C (-130°F) and an air pressure less than one percent of what is found on the Earth's surface.

When released, the balloon is about five feet in diameter and gradually expands in size as it rises, due to the decrease in air pressure. When the balloon reaches a diameter of about 25 feet in diameter, it bursts. A small, orange colored parachute slows the descent of the radiosonde, minimizing the danger to lives and property. Data are not collected while the radiosonde descends.



Image 4: Weather balloon when it bursts. Credit:
homestead.com

Worldwide, there are over 800 upper-air observation stations; NWS takes observations at 92 stations; 69 in the conterminous United States, 13 in Alaska, nine in the Pacific, and one in Puerto Rico. Observations are taken twice a day, at the same time each day, 365 days a year.

[Here is an example of a high wind balloon launch](#) from the NWS Grand Junction.

2019 ELECTRONICS REPORT

CHRIS KORNKVEN, ELECTRONIC SYSTEMS ANALYST



Image 1: ET Mike Martinez at Crested Butte UCRP site. Credit: NWS

2019 was another busy year for the Electronics staff at WFO Grand Junction. It began with notification of a GPS problem with our Upper Colorado River Gage sites. If uncorrected, the problem would have caused all 29 of our sites to stop transmitting right at the start of spring snowmelt. After obtaining the needed software, testing and careful travel planning, all sites were upgraded before the April 6th deadline. Significant snowfall over the winter meant some sites were a challenge to upgrade as shown in Image 1

where Electronics Technician (ET) Mike Martinez is digging down to the enclosure housing the transmitter.

High snowfall amounts on Grand Mesa meant coordinating with CDOT and CAIC to travel through Highway 65 closures to restore the radar to operation after a datalink failure. In addition to the typical maintenance and software installations, there were a few repairs needed during the year. The end of the year saw considerable work performed on both transmitters as a part of the Service Life Extension Program in which both transmitters received new wiring harnesses. This work is intended to extend the operational life of the radar well into the future.



Image 2: Installing the new wiring harness in the radar transmitter. Credit: NWS



Image 3: ET Mike Martinez at the Radar snow shelter showing how deep the snow was. Credit: NWS

Other improvements that will insure the reliability of the radar involved installing new microwave datalink equipment at State of Colorado facilities. This datalink carries our radar data as well as NOAA

Weather Radio audio to three other locations. Further work on this will take place in spring of 2020.

2019 ELECTRONICS REPORT

(CONTINUED)

CHRIS KORNKVEN, ELECTRONIC SYSTEMS ANALYST



Image 4: Unloading the modulator from the snow cat. Credit: NWS

The year was not over when a modulator failed in one of the transmitters at the radar site on Grand Mesa. Enough snow had fallen by then requiring the 300-pound crate be delivered using the snow cat. Getting the modulator installed means both transmitters will be operational throughout the winter months.

Other significant activities during the year resulted in our Upper Air system being converted from using Helium in our balloons to Hydrogen, the office roof getting new shingles, extensive, low-maintenance landscaping, new HVAC controls installed and the interior office painted. In addition to all this, over 800 other maintenance actions were taken on our systems and facilities to keep them operational into 2020 and beyond.

WFO GJT PARTNERS WITH FUMC FOR ADOPT-A-LAKE CLEANUP

MATTHEW ALEKSA, METEOROLOGIST

Mother Nature could not have provided more beautiful weather for our typically bi-annual Adopt-A-Lake trash cleanup. This year, the National Weather Service (NWS) in Grand Junction, Colorado decided to partner with the First United Methodist Church (FUMC) in Grand Junction of which meteorologist Matthew Aleksa and his wife are active members and worship leaders. Warning Coordination Meteorologist, Jeff Colton, and Matthew Aleksa from the NWS were joined by several members of FUMC for a grand total of 14 that helped clean up Eggleston Lake on the Grand Mesa on Saturday, August 31. Eggleston Lake was a recent addition to our other three adopted lakes, adopted in memory of lead forecaster Larry Smith who passed away unexpectedly at Eggleston Lake in the summer of 2017. The Adopt-A-Lake program was established by the US Forest Service to help keep our lakes clean and preserve the natural beauty of the landscape.



Image 1: Before Lake Cleanup at Grand Mesa Visitor Center from Left to Right: The Goldthwaite family, Pastor Steve Easterday-McPadden, WCM Jeff Colton, Matthew Aleksa and boys, the Bragdon family, Kim Easterday-McPadden. Photo credit (not pictured): Anna Aleksa and baby Ayla



Image 2: After Lake Cleanup at Eggleston Lake from Left to Right: Pastor Steve Easterday-McPadden, Jim Bragdon, Kim Easterday-McPadden, Lynn Bragdon, WCM Jeff Colton, Matthew Aleksa and boys, the Goldthwaite family. Photo credit (not pictured): Anna Aleksa and baby Ayla

The Grand Mesa is home to many recreational activities such as hiking, biking, camping, fishing, and skiing. The Adopt-A-Lake cleanup is one of the many ways for us to reach out to our community by cleaning up four of the 300 plus lakes on the Grand Mesa, just before the mountain snowpack starts building, and make our presence known outside the office.

We collected several bags of trash and it was appreciated by many who were enjoying the beauty of the lake on Labor Day weekend. The NWS would like to extend our deepest gratitude to FUMC for helping us make this year's Adopt-A-Lake trash cleanup a success. We plan to partner with FUMC annually and alternate our adopted lakes every other year. In 2020, we plan to tackle Twin Lakes 1 and 2 which haven't been cleaned up since 2016, then onto Kitson Reservoir in 2021.

COOPERATIVE OBSERVER PROGRAM: 2019 LENGTH OF SERVICE AWARDS

JOHN KYLE, DATA ACQUISITION PROGRAM MANAGER

The National Weather Service (NWS) Cooperative Observer Program (COOP) is the Nation's weather and climate observing network of, by and for the people. More than 8,700 volunteers take observations from various locations nationwide. In western Colorado and eastern Utah there are approximately 75 of these observers. The data are truly representative of where people live, work and play.

The Coop mission is two-fold:

- To provide observational meteorological data, usually consisting of daily maximum and minimum temperatures, snowfall, and 24-hour precipitation totals, used to define the climate of the United States
- To provide observational meteorological data in near real-time to support forecast, warning and other public service programs of the NWS

Coop observational data supports the NWS climate program and field operations. The program responsibilities are accomplished by the local Data Acquisition Program Manager and include:

- Selecting data sites
- Recruiting, appointing and training of observers
- Installing and maintaining equipment
- Keeping and updating station and observer documentation
- Collecting data and its delivering it to users
- Maintaining data quality control
- Managing fiscal and human resources required to accomplish program objectives

A cooperative station is a site where observations are taken or other services rendered by volunteers. Observers generally record temperature and precipitation daily and electronically send those reports daily to the NWS and the National Centers for Environmental Information (NCEI). Many cooperative observers provide additional hydrological or meteorological data, such as evaporation. Data is transmitted via telephone, computer or, in cases, by mail. Equipment used at NWS cooperative stations may be owned by the NWS, the observer, or by a company or other government agency, as long as it meets NWS equipment standards.

There were 11 length of service awards presented to 11 of our COOP observers. The photos of the award presentations with a description in the caption are displayed on the next few pages below.

COOPERATIVE OBSERVER PROGRAM: 2019 LENGTH OF SERVICE AWARDS (CONTINUED)

JOHN KYLE, DATA ACQUISITION PROGRAM MANAGER

The following are 11 of the 2019 COOP awards in order based on length of service:



Image 1: Lewis Black (left) of Blanding, Utah, receives a 30 year Length of Service Award from NWS Grand Junction. Presenting the award is John Kyle (right), Data Acquisition Program Manager (DAPM). As an aside to taking daily cooperative weather observations, Mr. Black took 3 hourly aviation observations for nearly 20 years in service to the NWS. Credit: NWS



Image 2: Gabe Chenoweth (left) of radio station KMTS in Glenwood Springs, Colorado, receives a 30 year Length of Service Award from NWS Grand Junction. Presenting the award is John Kyle, DAPM, NWS Grand Junction. Credit: NWS



Image 3: Ron Pierce (right) of Moab, Utah receives a 25 year Length of Service Award from NWS Grand Junction. Presenting the award is John Kyle, DAPM, NWS Grand Junction. Credit: NWS



Image 4: Paul Bonnifield of Yampa, Colorado receives a 25 year Length of Service Award from NWS Grand Junction. Paul, wife Ellen and backup observer and friend DeAnna Berry have been dedicated observers for 25 years. (Not pictured and presenting the award is John Kyle, DAPM, NWS Grand Junction.) Credit: NWS

COOPERATIVE OBSERVER PROGRAM: 2019 LENGTH OF SERVICE AWARDS (CONTINUED)

JOHN KYLE, DATA ACQUISITION PROGRAM MANAGER



Image 5: Accompanied by their dog Ginger, Ray (right) and Margie Veatch (center) of Delta, Colorado receive a 20 year Length of Service Award from NWS Grand Junction. Presenting the award is John Kyle, DAPM, NWS Grand Junction. Credit: NWS



Image 6: Accompanied by his newly installed temperature equipment, Jay Van Loan (right) of Glade Park, Colorado receives a 20 year Length of Service Award from NWS Grand Junction. Presenting the award is John Kyle, DAPM, NWS Grand Junction. Credit: NWS



Image 7 (on left): David Baldinger Jr. (right) of Steamboat Springs, Colorado receives a 15 year Length of Service Award from NWS Grand Junction. Presenting the award is John Kyle, DAPM, NWS Grand Junction. Credit: NWS

COOPERATIVE OBSERVER PROGRAM: 2019 LENGTH OF SERVICE AWARDS (CONTINUED)

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Image 8 (on left): Staff from the National Park Service at Black Canyon of the Gunnison National Park celebrate with Paul Zaenger in his receiving a 15 year Length of Service Award from NWS Grand Junction. The staff from Black Canyon have been taking daily weather observations for many years and began taking observations for the NWS in October of 2003. Pictured from left to right: Matt Peterson, Park Ranger/Interpretation; Gina Poulson, Park Ranger/Interpretation; Paul Zaenger, Supervisory Park Ranger; John Kyle, DAPM, NWS Grand Junction (presenting award).
Credit: NWS



Image 9 (on right): Bernice White of Norwood, Colorado receives her 10 year Length of Service Award from NWS Grand Junction. Presenting the award is John Kyle, DAPM, NWS Grand Junction. Credit: NWS

COOPERATIVE OBSERVER PROGRAM: 2019 LENGTH OF SERVICE AWARDS (CONTINUED)

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Image 10 (on left): Larry Bernat (left) of Rifle, Colorado receives a 10 year Length of Service Award from NWS Grand Junction. Larry has volunteered for a number of organizations over the years, including Habitat for Humanity and Colorado Parks and Wildlife. Presenting the award is John Kyle, DAPM, NWS Grand Junction. Credit: NWS



Image 11 (on right): Douglas Bryce (right), Supervisory Forester for the Bureau of India Affairs in Fort Duchesne, Utah receives a 10 year Length of Service Award from NWS Grand Junction. Presenting the award is John Kyle, DAPM, NWS Grand Junction. Credit: NWS



NATIONAL WEATHER SERVICE

2844 AVIATORS WAY

GRAND JUNCTION, COLORADO 81506

Email: wxgjt@noaa.gov

Phone: (970) 243-7007

Fax: (970) 257-0452

Grand Junction Forecast: (970) 243-0914



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