



The National Cooperative Observer

The National Cooperative Observer is an online newsletter.

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Spring-Summer 2022

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Matanuska Farm Recognized for 100 Years of Weather Observations



Jodie Anderson, Director of the Matanuska Experiment Farm and Extension Center (left) and Dr. Scott Lindsey, NWS Alaska Region Director (right)

The Matanuska Experiment Farm and Extension Center, a working research facility with 260 acres of cultivated land and 800 acres of forestland, received a 100 year Honored Institution Award.

The Farm serves Southcentral Alaska and conducts research on soils, plants, and livestock and also works closely with Alaska Department of Fish and Game to conduct nutritional studies on moose and caribou. The Farm has been taking daily weather observations since July 1, 1917 and is only one of two sites in the state of Alaska that provide evaporation data, which is critical for both drought metrics and the agricultural community.

Photo taken by Matanuska Farm staff.

Technological Advances in Weather Observation

As the network for gathering weather observations grew, the government began introducing new technologies to collect and save weather observations. In recognition of the need to make weather observations vertically in the atmosphere, in 1885, Professor Henry Allen Hazen made the first balloon flights to take meteorological observations above the Earth's surface.

The young Cooperative Observer Program (COOP), formed with the Organic Act of 1890, saw several advances in weather observation in its early years. In 1898, the U.S. Weather Bureau began to experiment with kites to measure temperature, relative



Getting ready to launch a Weather Bureau kite.

Technological Advances in Weather Observation (cont.)

humidity, and winds in the upper atmosphere. In 1909, the Weather Bureau began to use balloons for upper air information, a method still in use today.

Observations and Aviation

The advent of aviation changed the Weather Bureau substantially. In 1926, the Air Commerce Act directed the Weather Bureau to provide weather services to civilian aviation. Around this time, weather observations were also being taken by the U.S. Navy and the Weather Bureau from airplanes. Thus, the connection between weather operations and aviation was established.

During the mid-1900s, weather observing technologies started growing at a rapid pace. In 1934, 20 daily aircraft observations were flown by the Weather Bureau and its partners. This program proved to be risky and expensive and was replaced by the pilot-balloon (pibal) program.

The pibal was replaced by the radiosonde in 1938, a change that allowed weather observations up to 100,000 feet (30 kilometers) to be collected. Radiosondes are units for use in weather balloons that measure various atmospheric parameters, such as air temperature, humidity, and pressure, and transmit information to a fixed receiver on the ground. Additionally, unlike the pibal, the radiosonde could be launched in most types of weather conditions.

A major step in hurricane observations and forecasting took place during World War II, when, on July 17, 1943, Colonel Joseph P. Duckworth and Lieutenant Ralph O'Hair, Army Air Force, made the first known weather observations of a hurricane from an aircraft at an altitude of 5,000-6,000 feet (1,500-1,800 meters). Since this first intentional flight into a hurricane, NOAA has routinely flown into storms that are a threat to the U.S. Today, onboard radar and instruments provide NOAA meteorologists with an unparalleled density of data about hurricanes.

Radar and Satellites

Two new weather observing technologies—weather radar and weather satellites—were developed almost simultaneously during the 1950s. Both technologies were developed to directly support needed weather observations during military campaigns. Today, we refer to weather observations from radar and satellites as "remote sensing." Remote sensing means we can obtain weather observations far from the weather observing technology and greatly expand our weather observing network.

The radar technology originally designed to detect and locate hostile aircraft in World War II served as the basis for the advanced weather radar systems that are saving lives



This image shows early testing of hydrogen-filled balloons for radiosonde measurements. The theodolite in the image was used to track the balloon to the limit of visibility.

During the mid-1900s, weather observing technologies started growing at a rapid pace.

Technological Advances in Weather Observation (cont.)

today. Weather radars were first operated by the Army in 1954. The first weather radar was operated by the Weather Bureau in Miami in 1959. Today, NOAA's National Weather Service relies daily on radar to detect, locate, and measure precipitation inside clouds.

The first weather satellite was successfully launched on April 1, 1960. Weather satellites allow us to observe the entire Atlantic and Pacific Oceans in minutes. These new technologies dramatically reduced "weather surprises" by observing the atmosphere more frequently. Today, cloud images collected from these satellites are seen daily on television weather forecasts.

Honored Institution Award



Bruce Frazier of the Bristol Virginia Water Treatment Plant was recently presented with the 50 year Honored Institution Award. Although Bruce has been at this plant for years, he was previously an Observer at the Richlands Virginia Water Treatment Plant.

Presenting the award and taking the photo was Derek Eisentrout, OPL at Morristown, TN.

40 Year Length of Service Awards

Observer Mel Bowns received his 40 year Length of Service Award. Mel moved to Alaska in 1965, just one year after the Great Alaska Earthquake (M9.2). He spent much of his 30+ year career teaching in Kotzebue and other schools across the state. Mel is very active in the HAM radio community. He lives with his wife, Dee, in Eagle River, AK.

35 Year Length of Service Awards



Eddie Archer, a Cooperative Weather Observer in Newcomb, TN, was recently presented with his 35 year Length of Service Award. Eddie's efforts always go well beyond his normal COOP observations, as he regularly contacts the Morriston forecast office during and after significant weather events with real-time reports. In the past, Eddie has also written multiple weather-related articles for his local newspaper.

Award presented and photo taken by Derek Eisentrout,

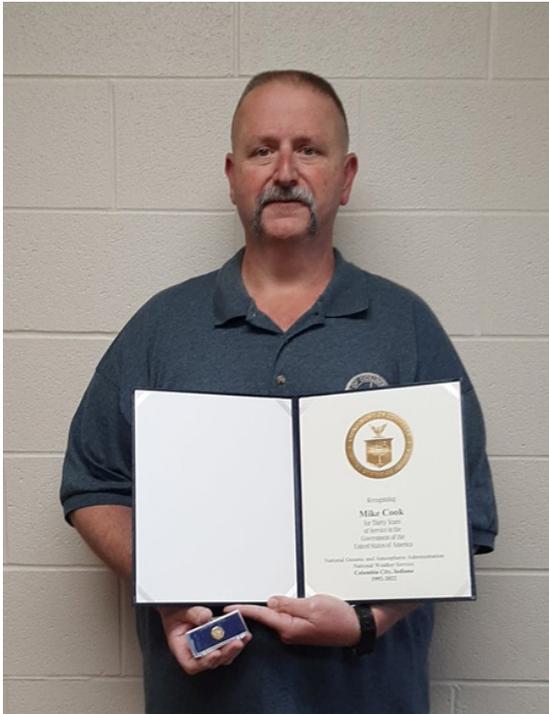


Mr. Scot Campbell was presented his 35 year Length of Service Award. Scot is a supervisor at the Little Valley Nursery, where two of his employees, Constantino Mendoza and Jorge Montez, assist Scot in taking the weather reports. We appreciate the devotion of Constantino, Jorge, and Scot for taking accurate and timely observations.

Presenting the award was Jim Kalina, OPL at Boulder, CO.

Scot Campbell (right) receiving his 35 year Length of Service Award with employees Constantino Mendoza (center) and Jorge Montez (left).

30 Year Length of Service Awards



Mike Cook, Superintendent of the Columbia City Water Pollution Control Facility, received his 30 year Length of Service Award for his work as a COOP Observer for the past 30 years. His primary job is to oversee facility operations and submit reports to the state of Indiana and the EPA. Rainfall intensity and rain rates are very important to operations. Mike gets the rainfall rates from a Davis weather station, but he routinely compares the total daily precipitation reported by the Davis with what he measures in the COOP SRG (standard rain gauge). In his free time, Mike enjoys golfing, especially at the Eagle Glen Golf Club.



Dan Casad received his 30 year Length of Service Award. Dan started his career with the Lakeville Indiana Water Works in 1985. He left in 2005 but returned in 2012 as the primary Weather Observer until his retirement in 2022. He served as a NWS COOP Observer for 31 years. Dan submitted the daily temperature and precipitation data in monthly reports to the EPA. The precipitation data is of particular use for determining the ditch to waste water discharge dilution ratio, which must not exceed 10:1. Dan still visits his former colleagues and friends often at the Lakeville city garage. In his free time, which is ample in his retirement, Dan enjoys riding his Harley Davidson motorcycle through the hills of southern Indiana.



Max Altenbern (left) and DAPM John Kyle (right)

Max Altenbern received his 30 year Length of Service Award. The Altenber family has been taking daily weather observations from their ranch northwest of DeBeque, CO, for nearly 80 years. Max's father, Orville, began taking observations on November 1, 1942.

25 Year Length of Service Awards



Tom and Kym Swanks, Cooperative Weather Observers in Ten Mile, TN, were presented with the 25 year Length of Service Award. The Swanks have a large farm in Meigs County, which was in the path of the total solar eclipse in 2017. In addition to hosting graduate students from the University of Tennessee, they graciously welcomed staff from the Morriston NWS office and NOAA's Atmospheric Turbulence and Diffusion Division (ATDD) in Oak Ridge, TN. This provided the ATDD staff the opportunity to perform multiple drone flights to gather atmospheric data during the eclipse.

Award presented and photo taken by Derek Eisentrout, OPL at Morristown, TN.



Veta Mitchell was presented her 25 year Length of Service Award. An Observer at Virginia Dale 7 EHE, CO, Veta has been one of NWS's most trusted Observers over the years. We very much appreciate her service and dedication.

Presenting the award was James Kalina, OPL at Boulder, CO.

25 Year Length of Service Awards



Mike Helmley (left) and Dodge City WCM Jeff Hutton (right)

Mike Helmley, Cooperative Weather Observer for Kiowa, KS, was presented with his 25 year Length of Service Award on May 6th by Jeff Hutton, WCM for Dodge City, KS. Jesse Lee, Observing Program Leader, was also in attendance.

The Kiowa station was started in November of 1891. There was a long break from 1895 until 1938, when there were no observations. The station was started up again in 1938 by Adolph Meixner. Mr. Helmley took over the station from the City of Kiowa in 1996 and has been recording temperature, precipitation, and snowfall data since.



John Mahoney received his 25 year Length of Service Award for taking daily observations at the Elkhart Public Works facility in Elkhart, IA. The facilities process both drinking and waste water. John's favorite part of this job is the daily travel to each of the city's water plants to test for chemicals and contaminants, because he enjoys visiting the various sites and listening to the radio while driving around the city. When he is not working, John also enjoys playing with his puppy, making tie-dyed shirts and totes for sale at local markets, and taking care of his family.



Jim Andrus received his 25 year Length of Service Award. Jim has been taking daily weather observations from Cortez for 25 years. After getting his Meteorology degree in 1968, Jim's early career included observing weather in the Air Force from 1968 to 1972, then working for the NWS as an AFOS programmer in Washington D.C. from 1976 to 1979.

20 Year Length of Service Awards



Swede Homgren (left) and WCM Jeff Hutton (right)

Swede Homgren, Cooperative Weather Observer in Ellis, KS, was presented with a 20 year Length of Service Award on June 24th by Jeff Hutton, WCM for Dodge City, KS. Also in attending the presentation was Jesse Lee, Dodge City OPL.

Mr. Holmgren has been the primary Observer since 2002 and is retiring this year. He recorded precipitation and snowfall data.

The Ellis station was started in 1884 by A. Moggart. There have been a few gaps where there was no data in the early days. Mr. Holmgren has been one of the longest serving Observers for Ellis.



David Voisinet was recognized for 20 years as a COOP observer and presented with a Length of Service Award by NWS Melbourne.

David, the Lead Observer at the Tropical Farms Water Treatment Facility in Port Salerno, FL, is always prompt with the submission of observations and is helpful when quality controlling the data submitted. Recently, David was an integral part to help brainstorm a small relocation of the site due to planned construction, ensuring that COOP observations were not affected. Congratulations David!



DAPM John Kyle (left) and Emil Shutt (right)

Emil Shutt receives his 20 year Length of Service Award. Emil continues observing from the Shutt homestead, where his dad Robert started taking daily observations in 1930.

20 Year Length of Service Awards



DAPM Tim Kearns (left) and Dave Schaefer (right)

Dave Schaefer received his 20 year Length of Service Award from Aberdeen DAPM Tim Kearns. Photo by Ryan Vipond.



Burke Goebel (left) and Dodge City WCM Jeff Hutton (right)

Burke Goebel, a Cooperative Weather Observer of rural northern Hodgeman County in Kansas, received his 20 year Length of Service Award from Jeff Hutton, Dodge City WCM. Burke has recorded temperature, precipitation, and snowfall data since 2000.

The history of the northern Hodgeman County site began in 1949 with Sam Pitts. Mr. Pitts was killed in an automobile accident in 1950, after which Emil Schneider took over. There have been several other Observers since then. Mr. Goebel took over the station from Mickey MacNair.



Troy Mattheyer (left) and Dodge City WCM Jeff Hutton (right)

Troy Mattheyer, Cooperative Weather Observer at Cedar Bluff Dam, was presented with a 20 year Length of Service Award on May 19th by Jeff Hutton, WCM at Dodge City, KS. Jesse Lee, OPL from Dodge City, was also in attendance for the presentation.

Troy has recorded temperature, precipitation, and evaporation data since 2001. The history of Cedar Bluff Dam station began in 1949. Except for a nearly three year period from 1998 to 2001, in which Carl Pinney of rural Trego County was the observer, the station has been maintained by the Bureau of Reclamation at Cedar Bluff Dam.

15 Year Length of Service Awards



Sheila Scherer (left), Joe Scherer (center), and Aberdeen DAPM Tim Kearns (right)

Joe and Sheila Scherer received their 15 year Length of Service Award from Tim Kearns, Aberdeen DAPM. Joe and Sheila provide data from the Timber Lake Climate report sent over NOAA Weather Radio.

Picture by Ryan Vipond.



Congratulations to Ben May, who was presented with a 15 year Length of Service Award NWS Melbourne. Not only is Ben a dedicated COOP Observer in Windermere, FL, but he also is very involved in the weather enterprise. He provides severe weather reports, writes educational articles for the AMS Weather Band, and serves on the NWA Foundation Board of Directors. Thank you, Ben, for your dedication and service!

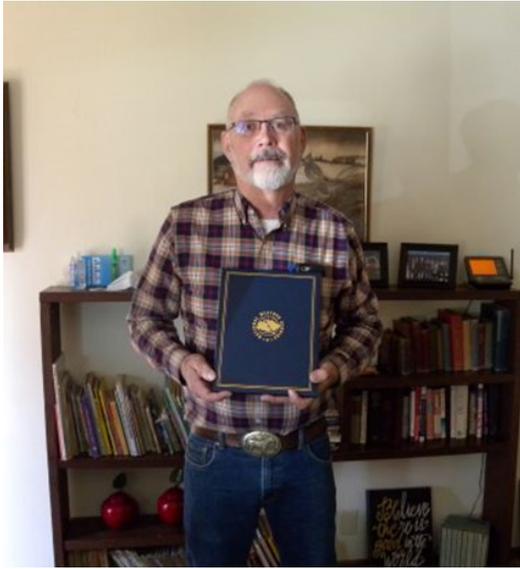


OPL Dwight Koehn (left) and Kent Hall (right)

Kent Hall of Summerville, SC was presented with his 15 year Length of Service Award for his dedication and service in the Cooperative Weather Observer Program.

Kent is a big part of why the Summerville 4 W site, with over 125 years of records, is so successful. This site began recording data on July 1, 1897. The site is currently located at the Pine Forest Country Club. Additionally, the South Carolina State Climatology office recognized Kent with a Letter of Appreciation for his dedication to the State and the Nation in 2020.

15 Year Length of Service Awards



Lyn Wright, a Cooperative Weather Observer in Cimarron, KS, received a 15 year Length of Service Award on April 6th, which was presented by Jesse Lee, OPL at Dodge City, KS.

Lyn has recorded temperature and precipitation data, including snowfall, since 2005. The Cimarron station was established in 1911 by C.C. Isely. There have been many Observers since Mr. Wright took over observing duties from Mark Mc.Phail in 2005. Mr. Wright had a few relatives that were Cooperative Weather Observers at other locations.



Ken Hericks received his 15 year Length of Service Award from Tim Kearns, Aberdeen DAPM. Ken provides wintertime and backup precipitation for the Pierre ASOS.

Picture by Ryan Vipond.



Dan Kafka, an Observer at Holyoke, CO, was presented a 15 year Length of Service Award. Presenting the Award was Jim Kalina, OPL at Boulder, CO.

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September, October, November Temperature and Precipitation Outlooks From the Climate Prediction Center

