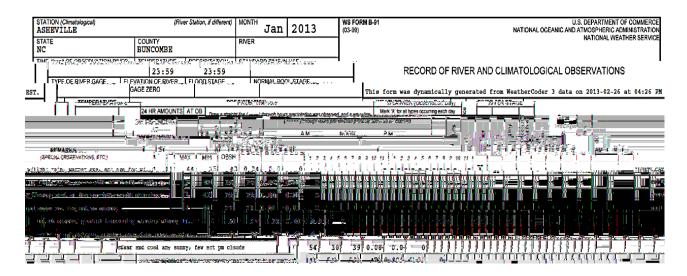
## RECORD OF RIVER AND CLIMATOLOGICAL OBSERVATIONS ENTRIES ON WS FORM B-91 (03-09) AND PRECEDING FORMS



The majority of cooperative (volunteer) observers use a web-based entry system for the National Weather Service (NWS) Cooperative Observer Program (COOP) called Weather Coder, or WxCoder, for short. Combined with IV-ROCS, the telephone entry system, WxCoder offers the means for daily entry of weather records for COOP volunteers. WxCoder is sponsored by the National Oceanic and Atmospheric Administration (NOAA) through the National Weather Service, the Regional Climate Center Program and the National Climatic Data Center. Only a very few volunteer observers continue to mail handwritten forms.

The COOP network consists of thousands of dedicated volunteers that take observations on farms, in urban and suburban areas, National Parks, seashores, and mountaintops. The input data are truly representative of where people live, work and play. Since 1890, the COOP network has fulfilled key mission elements:

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

Some COOP stations also record daily river stages, evaporation, soil temperature and wind speed and direction. While the Form B-91 is designed to be self-explanatory, the following comments are presented to assist in clarification.

**General:** Maximum and Minimum temperature and precipitation values are for the full twenty-four (24) hour period **ENDING** at the observation time. This observation time is usually listed in the B-91 heading, upper-left. Continuous surveillance of weather conditions is not expected or required at COOP stations and the absence of entries on the B-91 is not an unusual occurrence. "M" indicates missing data.

**Temperature:** Recorded in whole degrees Fahrenheit. Below zero readings are preceded by a minus (-) sign. Temperature "AT OBSN." is the actual air temperature at the time of observation. **DO NOTE**, daily extremes are for the 24-hour period ending at the time of observation. If, for example, the observation time is 0700 (7:00 am) and 75 is noted for the maximum temperature, it is most likely that 75 was the high temperature "yesterday" afternoon. The high temperature could have occurred at any time since 0700 yesterday morning, the time of the prior observation.

**Precipitation:** "Rain, melted snow, etc." are reported in inches and hundredths (xx.yy); "snow, ice pellets" are reported in inches and tenths (xx.y); "snow, ice pellets, hail, ice on ground" are reported in whole inches (xx.). A "T" (Trace) entered for rain and snow indicates precipitation did occur but the amount was too small to measure; when "T" is in the "on ground" column, the amount is less than one-half inch (<1/2"). A zero (0) is usually entered when no precipitation occurs, however, blanks may also indicate no precipitation. **DO NOTE**, total precipitation is for the 24-hour period ending at observation time. If, for example, the observation time is 0700 (7:00 am) and 0.25" is noted at the time of observation, it is quite possible that the precipitation fell "yesterday". It could have fallen at any time since 0700 yesterday morning, the time of the prior observation.

**Remarks:** Used to report weather conditions other than those listed, add information on an observed weather element, document times of storms and the severity of damage inflicted, etc. These remarks are often the only source of information about unusual weather and can provide insight not available elsewhere.

If further clarification is required, contact the:

National Climatic Data Center Phone: (828) 271-4800 151 Patton Avenue, Room 120 Fax: (828) 271-4876

Asheville, NC 28801-5001 E-mail: orders@ncdc.noaa.gov

For a more complete interpretation of the data, the services of a private consulting meteorologist may be required. Contact information for those in your area can be obtained from:

The American Meteorological Society 45 Beacon Street Boston, MA 02108 http://www.ametsoc.org/