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| **WS FORM 10-13-9 U.S. DEPARTMENT OF COMMERCE**  (20-10) NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  (Ref. NWSI 10-1301) NATIONAL WEATHER SERVICE  **AVIATION & SYNOPTIC OBSERVATION INSPECTION CHECKLIST** | | | | | | | | |
| **Observing Station** |  | | | **Type of Facility**  **Manual**  **Other** Describe Other: | | | | |
| **Date of Visit** |  | | |  | | | | |
| **Prepared by** |  | | | **NWS**  **Manual**  **A-Paid**  **S-Paid**  **A-Voluntary**  **Other** | | | |  |
| **Title** |  | | |  | | | |  |
| **Supervising Station** |  | | |  | | | |  |
| **Instructions:** Use of this checklist during the inspection is *MANDATORY*. Make entries and remarks as required or necessary. Use the appropriate column to rate the type of observing program you are inspecting, as identified below. A shaded box indicates this item is not normally used in this type of program. “NA” may be annotated when item is Non-Applicable.  **Disposition:** File this with the Station Inspection Report, WS Form 10-13-10. | | | | | | | | |
| **Type of Observing Program:** Use the numbered column under “Rating” corresponding to the type of observing program listed below. Completely shaded boxes indicate “NA”, but can be used if appropriate to that site.  **1** = Non-Federal – Manual  **2** = (Not Used)  **3** = Manual, Federal – NWS  **4** = NWS Funded Manual – A-Paid, A-Voluntary, S-Paid | | | | | | | | |
| **Ratings:**  Rate each item with either a “+”, “–”, or “NA”.  “+” can mean excellent, satisfactory, conditionally unsatisfactory, or yes.  “–” can mean unsatisfactory, conditionally unsatisfactory, or no.  An element receiving a “–” rating must have an explanation for corrective action to be taken or recommended procedures to follow. | | | | | | | | |
| **Inspection Guide** | | **Rating** | | | | | **Remarks Section** | |
| **1. Arrangement of Facilities** | | **1** | **2** | | **3** | **4** | Remarks | |
| Location of observing site is adequate. (If no, explain in remarks) | |  |  | |  |  | Backup Manual  Backup and Augmentation  Remark | |
| Location of weather sensors adequate. | |  |  | |  |  |  | |
| Adequate safety devices (sufficient lighting, guardrails or stairs, etc). | |  |  | |  |  |  | |
| For RH Requirements: | |  |  | |  |  |  | |

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| **2. Pressure** | | **1** | **2** | **3** | **4** | Remarks |
| ASI/DASI  Primary Backup | |  |  |  |  | DASI ASI |
| → | All comparison corrections displayed at, or near, DASI/ASI. If not, instruct office to post corrections. |  |  |  |  |  |
| Other  Primary Backup | |  |  |  |  | Barograph  Other |
| → | Other pressure instruments operated correctly (specify in remarks). |  |  |  |  |  |
| Routine comparisons completed in accordance with [FAA JO 7900.5](https://www.faa.gov/regulations_policies/orders_notices/index.cfm/go/document.information/documentID/1036970); enter current version in Remarks. (No Grace Period if Primary; 7 day Grace Period of Backup of Automated System) | |  |  |  |  | Daily if 2 altimeters  3 times a week with ramp aircraft  Adjacent station |
| Comparisons properly logged on [MF1M-10](https://www.weather.gov/media/jetstream/obs/mf1-10.pdf) or electronic media. | |  |  |  |  |  |
| Comparison satisfactory with inspecting official’s traveling standard if applicable. (7 day Grace Period for backup of automated systems.) | |  |  |  |  |  |
| Surveyed Height of pressure sensor on file with NWS. | |  |  |  |  |  |
| Correct height of instrument posted on or near the instrument. | |  |  |  |  |  |
| Pressure Reduction tables satisfactory. | |  |  |  |  |  |
| Instruments installed properly. (No Grace Period) | |  |  |  |  |  |
| Condition of instrument(s). | |  |  |  |  |  |
| Backup available. (7 day grace period) | |  |  |  |  |  |
| For RH Requirements: | |  |  |  |  |  |

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| **3. Temperature and Humidity** | **1** | **2** | **3** | **4** | Remarks |
| Temperature and dewpoint instruments properly functioning and in good condition. (30 day Grace Period) |  |  |  |  | List Instruments: |
| Dewpoint properly computed. |  |  |  |  |  |
| Temperature and dew-point backup available. |  |  |  |  |  |
| Temperature and Dewpoint data provided. (30 day Grace Period) |  |  |  |  |  |
| Weekly Hygrothermometer checks? |  |  |  |  |  |
| Condition of instrument shelter. Adequate supplies (muslin wicks, batteries, etc) |  |  |  |  |  |
| Location, general condition and exposure of instruments. (Where in use) |  |  |  |  |  |
| For RH Requirements: |  |  |  |  |  |
| **4. Precipitation** | **1** | **2** | **3** | **4** | Remarks |
| Condition of precipitation equipment. (Identify type(s) in remarks) (Where in use) |  |  |  |  |  |
| Condition of snowboard |  |  |  |  |  |
| Measuring stick |  |  |  |  |  |
| Exposure of precipitation measuring instruments. (Where in use) |  |  |  |  |  |
| Correct procedures used in measuring and identifying precipitation. |  |  |  |  |  |
| For RH Requirements: |  |  |  |  |  |
| **5. Wind** | **1** | **2** | **3** | **4** | Remarks |
| Method for determining Direction and Speed properly. (Identify method in remarks) |  |  |  |  | Remarks: |
| Estimation Procedures understood by Observer. |  |  |  |  |  |
| Gusts and Squalls understood by Observer. |  |  |  |  |  |
| Exposure of equipment. |  |  |  |  |  |
| Supports for equipment. |  |  |  |  |  |
| Equipment meets minimum accuracy standards. (30 day Grace Period) |  |  |  |  |  |
| Speed recorded in knots and accurate to within 10%. (30 day Grace Period, if equipment is required) |  |  |  |  |  |
| True direction recorded and accurate to within 10 degrees. (30 day Grace Period, if equipment is required) |  |  |  |  |  |
| For RH Requirements: |  |  |  |  |  |
| **6. Ceiling (15 day grace period)** | **1** | **2** | **3** | **4** | Remarks |
| LBC’s balloons, ceiling lights, clinometers in satisfactory condition. (Where in use) |  |  |  |  |  |
| Operation of equipment understood. |  |  |  |  |  |
| Helium available and safely stored. (Where balloons are in use) |  |  |  |  |  |
| For RH Requirements: |  |  |  |  |  |

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| **7. Observing Procedures** | **1** | **2** | **3** | **4** | Remarks |
| Observers familiar with visibility markers. |  |  |  |  |  |
| Tower Visibility reported correctly. |  |  |  |  |  |
| Pilot reports utilized. |  |  |  |  |  |
| Remarks encoded properly when required. |  |  |  |  |  |
| Corrections to observations performed as required. |  |  |  |  |  |
| Adequate on-the-job training for new observers. |  |  |  |  |  |
| Adequate arrangements for notification of observers in the event of an aircraft mishap. |  |  |  |  |  |
| Observers understand correct procedures in the event of an aircraft mishap. |  |  |  |  |  |
| Number of observations taken in your presence. (Indicate number in remarks.) |  |  |  |  |  |
| Observations taken in your presence performed adequately. If not, recommend training and notify NWS Regional Office. |  |  |  |  |  |
| Examination of observing certificates. |  |  |  |  |  |
| All observers certified and current. (No Grace Period) |  |  |  |  |  |
| Quality control/quality assurance of observations conducted on site. |  |  |  |  |  |
| Review of 30 day record of observations. |  |  |  |  |  |
| Observations reported on time. |  |  |  |  |  |
| Observation records neat and legible. |  |  |  |  |  |
| WS Form B-14 properly completed. |  |  |  |  |  |
| For RH Requirements: |  |  |  |  |  |

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| **8. Observational Aids and References** | **1** | **2** | **3** | **4** | Remarks |
| Visibility charts available. (30 day Grace Period) |  |  |  |  |  |
| Night time visibility markers indicated |  |  |  |  |  |
| Visibility charts appear accurate.  (Initial and date charts) |  |  |  |  |  |
| Cloud Atlas or cloud charts available. |  |  |  |  |  |
| Table of SPECI criteria available and correct. |  |  |  |  |  |
| FAA Order 7900.5 current and available; note the current version in Remarks. |  |  |  |  |  |
| FMH #2 available. (S-Paid only) |  |  |  |  |  |
| Station instructions adequate for observing, disseminating and quality control of observations. |  |  |  |  |  |
| Other aids available. (Training guides, Users Guides, station duty manual, reference guides, etc.) |  |  |  |  |  |
| Training aides utilized. |  |  |  |  |  |
| For RH Requirements: |  |  |  |  |  |
| **9. General** | **1** | **2** | **3** | **4** | Remarks |
| Required telephone numbers available. (supervising station, AOMC, etc). |  |  |  |  |  |
| Valid agreement in place and signed. (Manual – At Airports, A-Paid, S-Paid) |  |  |  |  |  |
| Cooperator willing to make observations available to other users (7 day grace period) |  |  |  |  |  |
| For RH Requirements: |  |  |  |  |  |
| **10. Rating/Comments** | | | | | |
| **Overall Rating:**  **Excellent** **Satisfactory** **Conditionally Unsatisfactory**  **Unsatisfactory**  Provide justification for rating and any additional remarks:    (Previous Versions May Be Used) | | | | | |

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| **Addendum: IAW NWSI 10-1301, Appendix C, 4.2.2, 1) through 9).**  1) Arrangement of Observing Facilities.   Determine if the site for taking visual observations:   * Satisfies the requirements in Appendix C. * Easy access is provided to evaluate the celestial dome. * At airports, evaluate if the location of meteorological sensors comply with requirements established in the [Federal Standard for Siting Meteorological Sensors at Airports (2019)](http://www.ofcm.gov/publications/fmh/siting/fcm-s4-2019.pdf). * Briefly evaluate the lighting and safety of observing facilities and that the observer has an unobstructed view of: * At least half of each quadrant of the natural horizon with no more than 45 degrees continuous obstruction. * At least 80 percent of the celestial dome (that portion of the sky which would be visible provided, due to the absence of human-made structures, there was an unobstructed view of the horizon in all directions from the observation site), and the ambient night lighting will not present a sky evaluation problem at the location. * The direction from which weather most often approaches the station.   2) Pressure.  The pressure/altimetry program is *one of the most critical elements* at a surface observation site and is required to be thoroughly checked for equipment and observation procedure accuracy.  Many programs depend on accurate pressure observations, and transmitted pressures are used by the FAA and other aviation interests for control and separation of air traffic.   * Pressure comparisons should be made by the inspector, comparing the traveling standard with the home station standard and backup instruments. * Pressure comparisons for ASOS should be accomplished by electronic technicians. * Offices using the Precision Digital Barometers (PDB) as their home station standard will provide comparisons as outlined in Appendix C Section 8.  1. Temperature and Humidity.  Proper exposure and accuracy of the temperature and humidity instrumentation (if needed) are *critical* in aviation weather observations. Review the following:  * Proper exposure of primary instrumentation and for adequate backup should be checked quite closely, in accordance with Appendix C and agency specific requirements. * Temperature comparatives should comply with the station’s appropriate observing handbook.  1. Precipitation.   Review the following:  * Ensure that the precipitation equipment (if needed) is properly exposed. * The back-up equipment is adequate and maintained in accordance with Appendix C. * Observing procedures and in compliance with instructions in the station’s appropriate observing handbook.  1. Wind.  Review the following:  * Visual checks of the wind equipment (if needed) should be made to determine if readings appear to be accurate and are properly observed. * Proper annotation of recording charts (when available) should be checked. * Wind sensor exposure should be checked.  1. Ceiling.  Review the following:  * Exposure and operation of equipment (if needed). * Observation procedures should be monitored. * Ceiling height tables should be checked for accuracy if appropriate.   7. Observing Procedures. Review the following:   * Allow time to monitor the observer’s routine duties for proper and efficient observation methods. * At NWS sponsored or affiliated sites, the station should have a set of instructions for observing, disseminating, and quality control of observations. * Review a sample of records for completeness, neatness, and accuracy if applicable. * Ensure that observations have been correctly disseminated and that errors have been corrected properly on observing forms or other media. * Review several days of transmitted reports with the corresponding days.   8. Observational Aids and References. Review for the following:   * Check visibility charts for currency and proper format. * Check that daytime and nighttime visibility markers are properly identified on the chart. * Check the criteria of special observations for accuracy. * The latest [FAA Digital Terminal Procedures Publication](https://www.faa.gov/air_traffic/flight_info/aeronav/digital_products/dtpp/) (digital-TPP) should be used to check the local special criteria.   9. General.  Check for administrative and miscellaneous items not covered elsewhere. |