

***NATIONAL WEATHER SERVICE PACIFIC REGION SUPPLEMENT 01-2010***

***APPLICABLE TO NWSI 10-1301***

***May 8, 2012***

***Operations and Services***

***Surface Observing Program (Land), NWSPD 10-13***

***Upper Air Program, NWSPD 10-14***

***Aviation And Synoptic Observations, NWSI 10-1301***

***REQUESTS FOR SPECIAL OBSERVATIONS, SYNOPTIC OBSERVING STATIONS IN  
MICRONESIA, STATION INSPECTION PROGRAM, DISPOSITION OF MAPSO  
RECORDS***

---

**NOTICE:** This publication is available at: <http://www.nws.noaa.gov/directives/>.

**OPR:** W/PRx4, x5 (D. Lee Loy, J. Bush)

**Certified by:** W/PR1 (B. Ward)

**Type of Issuance:** Routine

---

***SUMMARY OF REVISIONS:*** This supplement supersedes PR Supplement 01-2010, Requests for Special Observations, Synoptic Observing Station In Micronesia, Station Inspection Program, Disposition of MAPSO Records, dated April 21, 2012. Changes include:

1. Punctuation changes throughout the supplement.
2. Changes to verbiage in sections: 2.3.a; 3.1; 3.3; 3.4; 4.7.d; and, 5.1.
3. Update and reformat Appendix A.

\_\_\_\_\_  
Signed  
R. J. LaDouce  
Director, Pacific Region

\_\_\_\_\_  
April 24, 2012  
Date

**Requests for Special Observations, Synoptic Observing Stations in Micronesia, Station Inspection Program, Disposition of MAPSO Records**

Table of Contents: Page

- 1. General..... 3
- 2. Requests for Special Observations In Support of Operations..... 3
  - 2.1 Purpose..... 3
  - 2.2 Authority to take Special Observations. .... 3
  - 2.3 Requests from Forecast Centers..... 3
  - 2.4 Special Requests from other Agencies..... 4
  - 2.5 Specials Initiated Locally:..... 4
  - 2.6 Extending Hours of Operation. .... 5
  - 2.7 Transmission of Special Observations..... 5
- 3. Second Order Synoptic Observing Stations In Micronesia..... 5
  - 3.1 General..... 5
  - 3.2 Policy. .... 5
  - 3.3 Pacific Region Headquarters (PRH). .... 5
  - 3.4 Supervisory Offices..... 5
  - 3.5 Observing Equipment at Second Order Stations..... 5
  - 3.6 Weather Service Forms B-15-1 and B-15-2 (Record of 3 and 6 Hourly Synoptic Reports)..... 6
  - 3.7 Modified Synoptic Coding Practices. .... 6
  - 3.8 Collection and Transmission of Synoptic Reports..... 6
- 4. Station Inspection Program For Surface Observation Sites..... 7
  - 4.1 General..... 7
  - 4.2 Policy and Procedures..... 7
  - 4.3 Scope..... 7
  - 4.4 Frequency of Inspections. .... 7
  - 4.5 Responsibility for Inspections..... 8
  - 4.6 Forms and Reports. .... 8
  - 4.7 Disposition of WS Forms 10-13-9 and 10-13-10. .... 8
  - 4.8 Retention of WS Forms 10-13-9 and 10-13-10. .... 8
  - 4.9 Technical Guidance..... 9
- 5. On-Station Retention and Disposition of MAPSO Records..... 9
  - 5.1 Policy. .... 9

Appendix

A. List of Staffed Surface Observation Sites by Type and Supervising Office ..... A-1

1. General. This supplement describes the National Weather Service (NWS) Pacific Region's (PR) methods and procedures for:

- a. Requests for special observations in support of operations.
- b. Second order synoptic observing stations in Micronesia.
- c. Station inspection program for surface observation sites.
- d. On-station retention and disposition of MAPSO records.

2. Requests for Special Observations In Support of Operations.

2.1 Purpose. The purpose of this section of the supplement is to summarize instructions for taking special upper-air and synoptic observations in support of severe weather and/or special requests in the Pacific Region.

2.2 Authority to take Special Observations. Special upper-air or synoptic observations from Pacific Region first and second-order stations shall be taken when requested from forecast centers listed in section 2.3. All stations will make maximum effort to meet such requests, scheduling overtime as needed.

2.3 Requests from Forecast Centers.

a. JTWC Pearl Harbor. Although the Japanese Meteorological Agency (JMA) has tropical cyclone warning responsibility for the western North Pacific west of the 180<sup>th</sup> meridian, the Joint Typhoon Warning Center (JTWC) issues tropical cyclone forecasts for U.S. interests. The JTWC may request through the Weather Forecast Office (WFO) Guam special upper-air and synoptic observation support from any WFO or Weather Service Office (WSO) in that area.

The JTWC will make requests to WFO Guam for additional observational support. The WFO Guam will contact the Micronesian WSOs from which specials are desired. An informational email will be addressed to PRH at [pr.essd@noaa.gov](mailto:pr.essd@noaa.gov).

All stations are obligated to take specials and to relay to second-order stations such requests for specials, except in emergency conditions such as a shortage of staff or hazardous weather. Specials will be started when requested by WFO Guam and continued at the intervals specified until word to discontinue is received.

Requested special synoptic and extra upper-air observations at 0600Z and 1800Z will be provided on a non-reimbursable basis when any of the following are present:

- A tropical cyclone warning has been issued for Micronesia,
- A tropical cyclone formation alert on a tropical disturbance is in effect, or
- Data from the selected station will directly enhance forecasting.

b. CPHC/WFO Honolulu. The Central Pacific Hurricane Center (CPHC) may request special upper-air observations from WSO Pago Pago and Data Collection Offices (DCOs) Hilo and Lihue. CPHC/WFO Honolulu will send requests for special observations to the stations concerned with an informational email to PRH at [pr.essd@noaa.gov](mailto:pr.essd@noaa.gov). Stations are expected to respond to such requests under the same conditions as specified in section 2.3.a.

c. Format: The special observations must be requested by station, date, and time, i.e., requesting message may not be on an “until further notice” basis. Additionally, not more than eight consecutive upper-air observations at 6-hour intervals will be made at a station. Therefore, such requests should anticipate the likelihood of a greater need for extra soundings within 72 hours.

d. Procedure: All upper-air observations taken at primary synoptic times (0000 and 1200 UTC) will be processed completely. Upper-air observations taken at 0600 and 1800 UTC will be coded only up to and including 100 Millibars/ Hectopascals (mbs/hpa), and use “10159” as the appropriate reason for termination in the upper-air observation message for the 0600 and 1800Z observations. Transmit the coded upper-air messages as-soon-as possible.

2.4 Special Requests from other Agencies. Requests received from other agencies will be referred to PRH for approval.

2.5 Specials Initiated Locally:

a. Upper-Air Observations. Upper-air stations are authorized to increase their program to six-hourly whenever a tropical cyclone is known to be within 300 nautical miles of the station, regardless of whether specials have been requested under the provisions of section 2.3.

b. Special Surface Synoptic Observations. MICs/OICs may request additional three and six-hourly synoptic observations from second-order stations under the WSOs supervision whenever there is reason to suspect that a tropical cyclone or other severe weather is developing or moving into the WSO’s Area of Responsibility (AOR). Hourly observations are authorized when a tropical cyclone is near an observing station but not

at the risk of observer safety. Reports from Second Order synoptic stations will not exceed 18 continuous hours.

- 2.6 Extending Hours of Operation. Offices operating less than 24-hours daily are authorized to extend station operating hours as necessary to comply with sections 2.3 or 2.5.
- 2.7 Transmission of Special Observations. Special observations should be transmitted using the standard communication headers/protocol over regularly used communication channels. FAX or long distance telephone calls may be used when normal telecommunication channels are out of order.
3. Second Order Synoptic Observing Stations In Micronesia.
  - 3.1 General. National Weather Service Pacific Region (NWSPR) operates a paid network of second order synoptic stations in Micronesia to support mission requirements. These stations are located on remote islands and atolls from the Republic of the Marshall Islands, westward across the Federated States of Micronesia to the Republic of Palau, and help fill the void in a data sparse region. Appendix A of this supplement lists the second order locations, supervising offices, and inspection schedules.
  - 3.2 Policy. This section of the supplement is applicable only to Micronesian second order synoptic stations. These stations located in WMO Region V, follow coding practices contained in Federal Meteorological Handbook No. 2 (FMH-2), and use the symbolic code form (FM12 SYNOP) for reporting surface observations from land stations. Due to lack of infrastructure (i.e., power, telecommunications, observing equipment), coding practices may be modified to reflect these limitations where necessary.
  - 3.3 Pacific Region Headquarters (PRH). The Data Systems Group (DSG) provides management assistance, observer certification, oversight of the network, and logistical support.
  - 3.4 Supervisory Offices. First Order Weather Service Offices (WSOs) Majuro, Pohnpei, Chuuk, Yap, and Koror are responsible for the supervision of second order stations within their respective AOR. Supervision includes site surveys, equipment installation, maintenance, and calibration, observer training and certification, observer payroll functions, station inspections, and data collection and transmission.
  - 3.5 Observing Equipment at Second Order Stations. The following equipment resources are provided for each station:
    - Barometer (Set to read Sea Level Pressure),
    - Anemometer (Hand Held – Read in Knots),

- Battery operated Psychrometer (For air temperature and dew point),
- 8 inch Standard Rain Gage,
- HF Radio (Transmission of reports to supervising office),
- FMH-2 (Synoptic Code Manual),
- Observational Aids (Conversion tables, charts and graphs),
- WS Form B-15-1 (Record of 3 and 6 hourly synoptic observations), and
- Observer Supplies (Raincoat, flashlight, paper, pens, pencils, etc).

3.6 Weather Service Forms B-15-1 and B-15-2 (Record of 3 and 6 Hourly Synoptic Reports). Stations shall use these forms to record, code, and archive the synoptic observations. The completed form B-15-1 will be sent to the supervising office at the end-of-each month. Supervising offices will collect the forms for payroll purposes, provide quality control checks and forward the forms monthly to the National Climatic Data Center (NCDC):

NCDC Services Center  
Rockcastle Business Park South  
618 Progress Drive  
Mt. Vernon, KY 40456

3.7 Modified Synoptic Coding Practices. Micronesian second order synoptic stations are not 24-hour stations and in most cases staffed by a single observer. Due to staffing and equipment limitations, second order stations are authorized to modify and report the following synoptic code groups:

Section 0	Iliii
Section 1	IrIxhVV Nddff 1SnTTT 2SnTdTdTd (3PoPoPoPo) 4PPPP (5app) (6RRRtr) 7ww// (8NhClCmCh)
Section 3	333 58P24P24P24 or 59P24P24P24 7R24R24R24R24 912ff
Section 5	555 9YYGG

Groups in parentheses ( ) are optional and may or may not be reported.

3.8 Collection and Transmission of Synoptic Reports. Second order stations shall transmit their reports by HF radio as-soon-as completed to the supervising office. Supervising offices shall promptly collect, quality control and transmit reports from all stations in their AOR over long-line circuits in bulletin format. WSOs shall report the additional groups MiMiMjMj YYGGiw in the heading of each bulletin.

Example: SMKA02 PTPP (DTG)  
AAXX 15124  
91350 11474 60504 10244 20223 40123 780// 333 58008 70043 91215  
555 91512=

4. Station Inspection Program For Surface Observation Sites.

4.1 General. An effective surface observing program depends on each observation site conforming to national and agency standards and guidelines. One of the most effective ways and means to ensure that standards and guidelines are being met is through first-hand evaluation of the observing programs at each staffed observing site.

4.2 Policy and Procedures. National Weather Service Instruction (NWSI) 10-1303, Appendix C, establishes standard guidelines, policy, and procedures for conducting an effective inspection program. All Pacific Region (PR) personnel responsible for conducting station inspections shall follow these guidelines during the inspection process. In addition, inspecting personnel shall be knowledgeable of the following NWS Directive System (NDS) procedural directives which are pertinent to the surface observations inspection program and follow the guidance provided in these directives as required. These directives are available on the web at URL: <http://www.nws.noaa.gov/directives/> . Managers should have these directives available for ready reference:

- 10-1301, Aviation and Synoptic Observations,
- 10-1304, Certification of Observers, and,
- 10-1305, Observations Quality Control – General.

4.3 Scope. The surface observation program in the Pacific Region includes the following type of stations:

- a. Staffed NWS observing offices including Weather Forecast Offices (WFOs), Weather Service Offices (WSOs), and Data Collection Offices (DCOs).
- b. Synoptic Paid Stations (Second-Order).
- c. Limited Aviation Weather Reporting Station (FAA LAWRS).
- d. FAA Contract Weather Observing Station (FCWOS).
- e. Supplemental Aviation Weather Reporting Station (SAWRS).

4.4 Frequency of Inspections. Each surface observing site shall be visited and inspected based on the following schedule:

- a. Stations listed in sections 4.3.a, 4.3.b, 4.3.c, and 4.3.d above shall be visited at least once per Fiscal year.
- b. Stations listed in 4.3.e shall be visited twice per Fiscal year.

- 4.5 Responsibility for Inspections. Supervising stations listed in Appendix A are responsible for station inspections in the Pacific Region. DCOs Hilo and Lihue are responsible for inspections for their assigned sites; WFO Honolulu will provide assistance to the DCOs as requested. The PRH Surface Program manager is responsible for the overall inspection program and can provide assistance as required. The PRH Data System Group managers will perform periodic assistance visits to offices.
- 4.6 Forms and Reports. Weather Service (WS) Form 10-13-9, Aviation & Synoptic Observation Inspection Checklist, shall be used to assist the inspector(s) in conducting a complete program review. WS Form 10-13-10, Aviation & Synoptic Observation Station Inspection Report, shall be used to complete a post-inspection written report. Both forms are electronic and available at URL: <http://www.nws.noaa.gov/om/forms>. When possible, the inspector should include with the WS Form 10-13-10 digital photographs that best show the layout of the observing site and equipment exposure.
- 4.7 Disposition of WS Forms 10-13-9 and 10-13-10.
- a. Electronic copies of completed WS Forms 10-13-9 and 10-13-10 will be sent to the PR Surface Program Manager and the MIC/OIC for review within 5 working days of returning to the home station.
  - b. Subsequent to review, the forms shall be returned to the inspector(s) for correction(s) if any. This subsequent review period should be for no longer than 5 working days.
  - c. If there are no correction(s), or if corrections have been made, the forms shall be returned to the inspector(s) so that an electronic copy and a printed copy can be made available to the station manager of the observing site that was inspected. A copy will be provided to the inspector's station manager as well as the appropriate WFO/WSO/DCO MICs/OICs, if applicable.
  - d. The PR Surface Program Manager will upload an electronic copy of the inspection report to the NWS Headquarters Inspection Database, forward a copy to the local FAA office if applicable, and file a printed copy for the record.
- 4.8 Retention of WS Forms 10-13-9 and 10-13-10.
- a. The supervising field office shall retain these forms for at least 3 years.
  - b. PRH shall retain these forms for at least 2 years.
  - c. Regardless of recency, the supervising field office should retain the latest inspection report for information and continuity until it is superseded.



- 4.9 Technical Guidance. Supervising field offices should contact the Region's Surface Program Manager for assistance as required.
5. On-Station Retention and Disposition of MAPSO Records.
- 5.1 Policy. Pacific Region (PR) first-order stations (Majuro, Pohnpei, Chuuk, Yap, and Koror) using Microcomputer Aided Paperless Surface Observations (MAPSO) for taking METAR, SPECI, F-6, and SYNOPTIC observations shall follow the procedures listed below for on-station retention and disposition of these observational records:
  - a. In addition to end-of-month records that are sent to NCDC, retain MAPSO diskettes (copy of NCDC disk) on station for one year. After one year, recycle for future use.
  - b. Retain MAPSO printouts (hard copy) on station for three months, then dispose of locally. There is no longer a requirement to mail observational records to the University of Hawaii.

## APPENDIX A

## List of Staffed Surface Observation Sites by Type and Supervising Office

Supervising Office	NWS First Order Observing Sites	Inspection Cycle
WFO Honolulu	DCO Hilo <sup>1</sup>	Annual
	DCO Lihue <sup>1</sup>	Annual
PRH	WFO Tiyan (Guam) <sup>1</sup>	Annual
	WSO Chuuk	Annual
	WSO Koror	Annual
	WSO Majuro	Annual
	WSO Pago Pago <sup>2</sup>	Annual
	WSO Pohnpei	Annual
	WSO Yap	Annual

Supervising Office	FAA LAWRS Sites	Inspection Cycle
DCO Hilo	Hilo FAA ATCT <sup>1</sup>	Annual
	Kahului FAA ATCT <sup>1</sup>	Annual
	Kona FCT <sup>1</sup>	Annual
DCO Lihue	Lihue FCT <sup>1</sup>	Annual
WFO Honolulu	Honolulu FCWOS <sup>1</sup>	Annual
	Molokai FCT <sup>1</sup>	Annual
WFO Tiyan (Guam)	Agana FCT <sup>1</sup>	Annual
	Saipan FCT <sup>1</sup>	Annual

Supervising Office	SAWRS Sites (Cooperator)	Inspection Cycle
DCO Hilo	Kapalua Airport, Lahaina, Maui, HI (Hi-DoT)	Semi-Annual
PRH	Henderson Field Airport, Sand Island, HI (F&W) <sup>3</sup>	Annual
WFO Honolulu	Lanai Airport, Lanai City, Lanai, HI (WP) <sup>3</sup>	Semi-Annual
	Molokai Airport, Kaunakakai, Molokai, HI (WP)	Semi-Annual
WFO Tiyan (Guam)	Rota Int'l Airport, Rota Island, CNMI (CPA)	Semi-Annual
	Tinian Int'l Airport, Tinian Island, CNMI (CPA)	Semi-Annual
WSO Koror	Babelthuap/Koror Airport, Babelthuap Island, Palau (RoP)	Semi-Annual
WSO Majuro	Marshall Islands Int'l Airport, Majuro Atoll, Marshall Islands (MIAA)	Semi-Annual
WSO Pohnpei	Kosrae Airport, Kosrae Island, Micronesia (FSM)	Semi-Annual
	Pohnpei Int'l Airport, Ponape, Micronesia (FSM)	Semi-Annual

**Notes:**

1. Provide augmentation and/or back-up to an ASOS.
2. Provide augmentation and/or back-up to a non-fed AWOS-3PT.
3. Provide manual back-up observations (in part or complete) to an AWSS.

Supervising Office	Second Order Synoptic Stations	Inspection Cycle
WSO Chuuk	Fanunu Island	Annual
	Losap Island	Annual
	Lukunoch	Annual
	Onoun	Annual
	Polowat	Annual
WSO Majuro	Ailinglapalap	Annual
	Jaluit	Annual
	Mili	Annual
	Utirik	Annual
	Wotje	Annual
WSO Pohnpei	Kapingamarangi	Annual
	Kosrae	Annual
	Mwoakilloa	Annual
	Nukuoro	Annual
	Pingelap	Annual
WSO Yap	Ulithi	Annual
	Woleai	Annual

**Acronyms:**

ASOS	Automated Surface Observing System
ATCT	Air Traffic Controller Tower
AWOS	Automated Weather Observing System
AWSS	Automated Weather Sensor System
CNMI	Commonwealth of the Northern Mariana Islands
CPA	Commonwealth Ports Authority
DCO	Data Collection Office
F&W	Fish & Wildlife
FAA	Federal Aviation Administration
FCT	Federal Contract Tower
FCWOS	Federal Contract Weather Observing Site
FSM	Federated States of Micronesia
HA	Hawaiian Airlines
HI	Hawaii
Hi-DoT	Hawaii Dept. of Transportation
MIAA	Marshall Islands Airport Authority
PRH	Pacific Region Headquarters
RoP	Republic of Palau
WFO	Weather Forecast Office
WP	Island Air
WSO	Weather Service Office