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***NATIONAL WEATHER SERVICE INSTRUCTION 10-807  
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***Operations and Services***

***INTERNATIONAL SERVICE AGREEMENTS***

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 Regular International Aerodromes.

**1. Purpose.** This instruction guides RHs and field offices in meeting valid international aviation MET requirements.

**2. General.** The United States, a Contracting State in the ICAO, is responsible for providing MET service to international flights departing from or bound for airports in its territory, or transiting airspace over its territory. The NOAA Administrator is responsible for providing or arranging for this service, and for making any arrangements with foreign MET services which are needed in connection with the provision of service.

International air service is air service which passes through airspace over the territory of more than one country, while domestic air service is air service which passes through airspace over only one country.

However, flights between the CONUS and Hawaii, Alaska, Puerto Rico, any United States overseas possession, or Pacific Trust Territory (or any two of the last mentioned five), although formally classed as domestic flights, are provided with international type documentation. Flights between the CONUS and Canada which originate in either country and terminate in the other, though formally classed as international flights, normally receive, by agreement with Canada,

domestic-type service and briefings. Flights from the CONUS which overfly Canada, or are scheduled to make an intermediate stop only in Canada before continuing to a destination outside Canada, are entitled to receive international-type documentation. A flight between two points in the CONUS, which originated outside or will terminate outside the CONUS, is entitled to receive international-type documentation, on request, for the route segment between the two points in the CONUS; otherwise, domestic-type service and briefing will be provided.

**2.1 Correspondence with Foreign MET Services.** Correspondence regarding service to international aviation will be conducted according to the following precepts.

a. The NOAA Administrator is responsible for correspondence with directors of foreign MET services. The NWS Director has been delegated authority, however, to correspond directly with directors of foreign MET services on operational matters covered by existing policy.

b. In an urgent case, dealing with operational matters covered by existing policy, any of these five people may contact others having comparable functions and status in foreign MET services: the Director, NMC; the Director, TPC; or the Honolulu, San Francisco, or San Juan WFO MICs. Contact is made by normal telecommunications methods. Inform W/OS23, NWSH and RH, as soon as possible, about any such correspondence.

It is important to remember the NOAA Administrator is responsible for final arrangements with foreign MET services. Arrangements that could prejudice final approval will not be made at the field level.

**3. Background.** The ICAO designates (in Air Navigation Plans) AFCs and MWOs. There is one U.S. AFC (NMC) and six U.S. MWO's (New York, San Juan, Miami, San Francisco, Anchorage, and Honolulu). AFC, MWO, aerodrome, and other MET office functions are described by ICAO Annex 3, chapter 3. Some required MET services (briefing, flight documentation, etc.) are stated by ICAO, but the methods and means of meeting these services are determined by the MET Authority designated by the ICAO Contracting State.

**4. Services Provided.** The recommended procedures for providing MET services to international air navigation are contained in five basic ICAO documents.

a. Annex 3, Meteorological Service for International Air Navigation. This document prescribes basic MET obligations of ICAO Contracting States in serving international air navigation, and presents detailed procedures and guidance desirable for uniform fulfillment of those basic obligations.

b. Regional Supplementary Procedures, Doc. 7030, which documents different operating conditions encountered in throughout the world.

c. Air Navigation Plans, which now include many regional procedures developed by Regional Air Navigation meetings.

d. Location Indicators, Doc. 7910, which contains indicators for geographical locations

throughout the world.

e. PANS-ICAO Abbreviations and Codes, Doc. 8400, which contains abbreviations and codes approved for worldwide use in international aeronautical telecommunication service and aeronautical documents.

Offices at regular ICAO international aerodromes (Appendix 10-8-XXX) are obligated to provide service in accordance with ICAO procedures. Offices at ICAO alternate international aerodromes (Appendix 10-8-XXX) or other than ICAO international airports are not required to follow the same procedures in providing service for international aviation. However, they should provide service their data and work force limitations will allow. Service for international aviation should consist basically of operational planning information, briefing, documentation, area MET watch, and issuance of SIGMET information.

Remember, not all users of plain language forecasts (FACA, FAPA, FANT) use English as their native language. As a result, the contractions and/or abbreviations used in these forecasts and in SIGMET's prepared for international use, must come from the ICAO-approved list in Appendix 10-8-XXX. Spell out all other words in the forecast.

**4.1 Definition of Unique Terms.** Certain terms have unique definitions in service to international aviation. These are:

a. Requirement is a valid need, not necessarily something the U.S. is required to provide. Paragraph 2.1.3 of Annex 3 is applicable.

b. Provide is used solely in connection with the provision of service, including copies of appropriate forecasts (i.e., flight documentation).

c. Issue is used solely with cases where the obligation specifically extends to sending out the MET information.

d. Make available is used solely with cases where the obligation ends with making the information accessible in the MET office.

e. Supply is used solely in cases where either c. or d. above applies.

**4.2 Preflight Planning Information and Flight Documentation.** Preflight planning information and flight documentation are the main MET services provided to a departing aircraft. These services usually contain information for both preflight planning and crew documentation. Therefore, as a rule the service provides copies of appropriate facsimile charts and TAFs based on the aircraft type and flight path. **For low-level flights in the Caribbean, Eastern Pacific, and North Atlantic, copies of teleprinter data are provided, partly or entirely, in place of charts.** Service for preflight planning should be provided as soon as the data is available but no later than 3 hours before departure, if possible. However, crew documentation service should be provided as close to departure as possible. Preflight planning and crew documentation service should be updated (if later TAFs are available) by a copy of the new data, or by a new briefing or

consultation, consistent with the responsible office's capability. Provide chart documentation with valid times as close as possible to a flight's midpoint, as well as the most current TAF's valid for the estimated time of arrival.

a. Chart Selection. The route of flight determines the type of projection which best meets the needs of the flight. A flight entirely within the tropics would normally be provided with Mercator charts. One entirely within middle and/or high latitude regions would normally be provided with Polar Stereographic charts. A flight traversing both the tropics and the extratropics would normally be provided charts on the projection most suitable to the major portion of the route. However, there are flights which must be documented with charts on both projections (Anchorage-Honolulu flights). With this in mind, as well as the type of aircraft flown, the following selection of charts is suggested.

<u>Aircraft Type</u>	<u>Chart Selection Tropics</u>	<u>Chart Selection</u>
		<u>Extratropics</u>
Piston	700 mb and/or 500 mb; Sig Wx (Sfc to 400 mb)	Same
Turbo-prop	500 mb; 300 mb; Sig Wx (Sfc to 400 mb)	Same, except 250 mb in place of 300 mb
Subsonic jet	300 mb; 200 mb; SigWx (400 to 150 or 70 mb)	250 mb; T-VWS; Sig Wx (400 to 150 or 70 mb)
Long range Subsonic jet	Same as normal range subsonic jet, plus a 150 mb chart	
Supersonic jet	Same as normal range subsonic jet, plus a 100 mb chart	

b. Preparation of Flight Documentation. Provide the PIC or designated representative a set of flight documentation which contains appropriate charts and TAFs. Include copies of undecoded TAF's received through international exchanges, copies of appropriate prognosis charts, and WS Form D-6, Key to International Documentation. For low-level flights in the Caribbean and Eastern Pacific, give copies of plain language forecasts (FACA's and FAPA's) and appropriate TAFs, as well as a WS Form D-6. A TAF (and amendments) used in providing MET service for international flights is normally the TAF for the aerodrome provided by the country/state where the aerodrome is located. If you cannot get a TAF, try to get a provisional forecast; or if the office is a WSFO, it may prepare a provisional forecast (See Procedural Directive XX-XX-XX, International Aviation Aerodrome Forecasts for guidance). If you use a provisional forecast, write the word Provisional next to it on the copy of the TAF you give to the PIC or the operator's local representative (OLR).

c. General Guidance on Chart and Other Data Selection. Offices that provide preflight planning information and/or flight documentation service should provide the charts and other data to the OLR or the PIC to include any or all of the following.

(1) A statement of the general synoptic situation --usually a copy of the appropriate combination significant weather (SIGWX)-surface prog chart(s), or significant weather teleprinter bulletins -- is enough.

(2) Copies of applicable aerodrome forecasts, including those for destination airport and alternates, departure airport and alternates, and en route alternates. You may use TAF's, aviation symbolic terminal forecasts (such as FT) or the Caribbean-type plain language aerodrome forecasts (such as contained in the FTCA).

(3) Forecasts of winds, temperatures aloft, and tropopause topography. Usually copies of the appropriate constant pressure and/or tropopause-vertical wind shear (TVWS) charts, or copies of appropriate bulletins of grid-point winds and temperatures, are enough.

(4) Appropriate predeparture amendments to the flight and aerodrome forecasts, to include copies of any applicable SIGMET's (and any AIREP specials for which SIGMET's have not been issued) received before pickup of the flight documentation. If agreed upon locally, enter applicable SIGMET information directly onto a documentation chart instead of furnishing copies of the SIGMET's.

(5) Preflight planning information also includes the provision of MET data in digital form for computer flight planning. This is described in WSOM Chapter D-32, Aviation Digital Forecasts. NMC makes these forecasts available twice daily.

Give assistance as necessary in explaining the forecasts or refer the OLR or PIC to an appropriate office for assistance.

d. **Reproduction and Quality of Facsimile Charts.** Some operators prefer to make their own documentation from data received from their own drops on facsimile or teletypewriter circuits. Operators who don't have these drops may arrange for this service with others.

Stations should have suitable reproduction equipment for chart or forecast duplication. Stations without such equipment should advise their regional headquarters and made needed arrangements. Charts reproduced for international flights are at NWS expense. Charts reproduced for domestic flights are at the operator's expense.

Charts provided to operators should be legible over at least 95 percent of their area. If your charts should fail to be up to this level of quality at any time, make every effort to remedy the deficiency as quickly as possible. If local efforts do not resolve the problem, advise your regional headquarters and ask for an urgent solution to the problem.

**4.3 Operational Planning for Aircraft in Flight.** Give this information upon request. It should consist of any or all of the following, relevant to the flight in progress: (1) available routine and special reports, (2) aerodrome forecasts and amendments, (3) landing forecasts, (4) SIGMET's and appropriate special AIREP's, and (5) upper-air information. The operator is obligated to notify the appropriate MET office in advance, preferably before departure, of the requirement for

en route service, so the forecast can be ready before requirement time. You can provide this service by making copies of the latest TAFs and upper wind and temperature forecasts including amendments (in chart or grid-point form) available to the OLR who will determine the operational significance of the later forecast information and relay the information to the aircraft (A somewhat different procedure, developed specifically for serving aircraft in flight in the Pacific area, is described in Procedural Directive XX-XX-XX (D-35)).

**4.4 Briefing and Display.** An international aviation briefing is about the same as a domestic one. Briefing displays for offices regularly serving international aviation should include selected charts from the appropriate facsimile circuit and TAF's, in addition to hourly and special reports and forecasts and other data (such as SIGMET's, PIREP's, AIREP's, and satellite data) normally displayed for domestic briefings. The type and number of additional charts, other data, and forecasts to be displayed will depend on the routes and altitudes for which briefings are provided. No one shall actually revise a chart or forecast received from the AFC. However, if the forecaster or briefer believes the weather en route or at the destination will be different from that forecast, he is obligated to tell the flight crew or OLR about the difference and must make a note of the expected difference for record purposes.

Sometimes amendments or SIGMET's may come out after you've handed out the flight documentation and before aircraft takeoff. Give copies of them to the OLR to pass on to the PIC. You should have a local agreement specifying whether the amendments will be "issued" to the OLR or "made available" to the OLR, as described in subsection 4.1.

**4.5 Retention of Weather Documentation Materials.** NOAA directives require retention of forecast records for a period of 5 years: the first 3 years on station and the last 2 years either on station or the nearest regional Federal Archives and Records Center. These records include papers under such titles as forecasts, warnings, advisories, bulletins, alerts, watches, outlooks, summaries, and statements on anticipated atmospheric and hydrologic conditions.

All offices that prepare operational forecast charts (original) for flight planning and/or prepare aerodrome forecasts (originals) shall comply with this requirement. Stations only providing (assembling) documentation materials don't have to retain file copies of documentation materials provided. However, documenting stations shall maintain a log of all documentation furnished. Retain the log on station for at least 5 years. Items that should be on the log are: (1) date/time, (2) airline flight number, (3) documentation material provided, including the valid time of charts and valid period of TAF's.

**5. Requests for Service.** Send individual service requests to RH for coordination with NWSH (**Attn: W116x2**), especially when they involve new service, priority of existing service, or work force considerations.

**5.1 At Airport Meteorological Offices Designated to Provide International Service.** Offices located at regular international aerodromes (exhibit D-36-1) are designated to provide international service. In accordance with ICAO Annex 3, the operator is required to state their meteorological service requirements to the MET authority or MET office(s) concerned. If service requests are received for new routes or operations, or known unscheduled operations,

provide the service if the required forecasts are reasonably available, including through the Weather Message Switching Center (WMSC). If it is an unusual flight requiring special arrangements, forward details through your regional headquarters to NWSH (**W116**), with suggestions for providing the service. Don't make any final commitment in such instances until approved by NWSH. The operator should give reasonable advance notice, as much as a full month if special communications or forecast service arrangements must be made and not less than 2 months if coordination with a foreign meteorological service is required. When lead time before operations begin is not in accordance with these time lines, the office concerned should either:

- a. Provide the service requested, if at all possible, until NWSH gives approval of the service arrangement or an alternate plan; or
- b. Advise the operator that you can't provide the service because of insufficient advance notice. (This is rather drastic; do it only if absolutely necessary.)

### **5.2 At Airport Meteorological Offices Not Designated to Provide International Service.**

Stations other than those at regular international aerodromes sometimes get requests for service for international flights. They generally get such requests on short notice. The requests require an immediate decision. Although such stations have no legal obligation to do so, they should try to help the pilot get the service. This service doesn't have to be according to ICAO Annex 3. Here are some possible courses of action.

- a. The simplest thing is to suggest the flight operate as a domestic flight to a regular international airport where international MET service is available.

- (1) For Atlantic flights, suggest Baltimore, Boston, Chicago, Detroit, Miami, New York/Kennedy, Philadelphia, Pittsburgh, or Washington (Dulles).

- (2) For Mexican, Caribbean, Central or South American flights, suggest Los Angeles, New Orleans, Houston, Miami, or Dallas (Dallas-Ft. Worth Regional).

- (3) For Pacific flights, suggest Seattle (Seattle-Tacoma), San Francisco, or Los Angeles.

- b. If the flight is nonstop to a point outside the United States (except Alaska and Hawaii) or Canada, there are two alternatives.

- (1) If you get the request for MET service at least 24 hours before proposed departure time:

- (a) The WSO's should send a message by request/reply to the WMSC and ask for the appropriate grid-point wind and temperature bulletins, TAF's, and plain language significant weather bulletins. FAA Handbook 7110.10D, Part II, Chapter 7, Section 1, provides instruction on how to make a request message. When you receive the forecasts, you can either use them to brief the pilot or give them to the OLR, as received, for the pilot's own use.



(b) The WSFO's should either use the bulletins they get routinely, or get the needed bulletins by request message over WMSC dedicated circuits.

(2) If you get the request less than 24 hours before proposed departure time:

(a) If there's time, use the teleprinter procedures described before to get the information.

(b) If there isn't time, ask the PIC to contact the nearest airport station designated to provide international service. The call will have to be at the PIC's expense.

**6. Aircraft Observations.** ICAO procedures require aircraft observations be recorded on the AIREP form. WS Form D-8, AIREP Flight Log, is a copy of the essential features of the AIREP form, ICAO Model AR.

**6.1 Stocking and Issue of AIREP Flight Log.** The Central Logistics Supply Center, Kansas City, Missouri, stocks WS Form D-8 in sufficient quantities for offices which provide flight documentation and/or briefings for international aviation. Most air carriers supply their own AIREP forms, therefore the demand for WS Form D-8 may be small. However, aircraft observations are too valuable a data source, therefore offices serving international aviation should still maintain an ample on-hand supply.

**6.2 Collection and Disposition of AIREP Forms.** Offices at airports where international flights operate should collect completed AIREP forms - either WS Form D-8, a form issued by an air carrier, or an AIREP form issued by another government - and forward them the first of each month to the National Climatic Data Center in Asheville, N.C.