U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
Air Traffic Organization Policy

ORDER JO 7220.4A

Effective Date:
November 2, 2015

SUBJ: FAA Certification of Pilot Weather Briefing

1. Purpose of This Order. This order details procedures and responsibilities for the Federal Aviation Administration (FAA) certification process for Pilot Weather Briefing (PWB). Testing and certification is administered by the FAA Air Traffic Organization (ATO), Flight Services, Safety and Operations Group (FSSOG) personnel. This order is the governing document for FAA certification of all pilot weather briefers.

2. Audience. This order applies to all ATO personnel and anyone using ATO directives.

3. Where Can I Find This Order? This order is available on the MyFAA employee Web site at https://employees.faa.gov/tools_resources/orders_notices/.

4. Cancellation. This order cancels the following directives:

a. FAA Order 7220.4, FAA Certification of Pilot Weather Briefing and En Route Flight Advisory Service (EFAS).

b. FAA Form 7220-3, FAA Oral EFAS Evaluation Sheet.

c. FAA Form 7220-6, En Route Flight Advisory Certificate.

5. Explanation of Policy Changes. This revision removes the EFAS Certification procedures and requirements.

6. Tasks and Procedures. The FAA FSSOG must:

a. Administer and grade the written weather analysis, satellite, and weather radar tests and the oral PWB practical examinations (see Appendix A, Pilot Weather Briefing Certification Practical Examination Standards; and Appendix B, FAA Form 7220-2, FAA Oral PWB Evaluation Sheet). The FAA evaluator must conduct a debriefing after the conclusion of each oral examination.

b. Issue certificates of authority (CA) to certified pilot weather briefers.

c. Establish and maintain the official database for all certificates of authority. This database must include all evaluations scores, results of proficiency checks, as well as all dates and actions (i.e. issuance, suspensions, cancellations, invalidations, revalidations, etc.) relative to each CA.

d. Maintain a working knowledge of Flight Service facility operations, training, and certification programs and requirements.

e. Confer with Federal Contract Flight Service and FAA Flight Service personnel at national levels on proposed changes and updates to the certification program.

7. Pilot Weather Briefing Certification. PWB certification candidates must pass the written weather analysis, satellite, and weather radar tests and an oral practical examination in order to receive an FAA PWB Certificate.

a. Qualification Training. PWB candidates receive their initial qualification training from either the FAA or the Federal Contract Flight Service provider. This training must be successfully completed before the PWB candidate attempts to pass the PWB certification tests. Candidates must receive PWB position training at his/her flight service station before taking the oral practical examination. See FAA Order JO 3120.4, *Air Traffic Technical Training*, for position certification requirements.

b. Written PWB Certification Tests. PWB candidates must successfully pass FAA written certification tests for weather analysis, satellite, and weather radar. These tests must be proctored by facility training/supervisory personnel. The minimum passing grade for each test is 70. The FAA/FSSOG must:

(1) Complete FAA Form 7220-4, Qualification Report (Appendix C) following each evaluation.

(2) Score completed tests and forward the results to the PWB candidate. E-mail a copy of each report to the candidate's assigned facility.

(3) Ensure candidates have passed all three written tests prior to administering the oral PWB practical examination. If a candidate fails any of the tests, a formal request for an exam retake must be received by the FAA FSSOG manager from the facility manager.

c. Oral PWB Practical Examination. PWB candidates must successfully pass an oral PWB practical examination. The examination must be completed within two years of passing the written certification tests. The flight service facility manager will ensure a candidate has received sufficient on-the-job training with a certified pilot weather briefer within the six month period prior to the examination. A statement from the manager or designee that the candidate is prepared to take the examination must be included when requesting the oral examination. The examination must be administered by telephone or at the duty station. While the FAA FSSOG allows a supervisor or training specialist to listen during this oral examination, no help may be provided to the candidate.

(1) The oral practical examination must be recorded by the FAA FSSOG examiner and may be reviewed by the FAA FSSOG manager for quality control and improvement of the PWB evaluation/certification program. FAA Form 7220-2, FAA Oral PWB Evaluation Sheet (Appendix B), is used to determine the student's practical examination grade.

(2) The FAA FSSOG evaluator must ensure the oral PWB practical examination tests the candidate's ability to gather all pertinent weather and aeronautical data and present it to the pilot in a logical, concise, and easily-understood manner. For each briefing, the candidate will clearly provide pertinent current and forecast adverse conditions, current weather, forecast weather, and aeronautical information. The examination will also assess the student's radar and satellite interpretation skills. At any point during the examination or following the debrief, the FAA FSSOG evaluator may terminate, nullify, and reschedule the examination.

(3) The PWB practical examination consists of one low-level (below FL240) and one high-level (FL240 and above) pilot weather briefing. Each flight will be at least 200 nautical

miles long and evaluated in three general areas: background information, briefing content, and quality factors.

(4) To ensure objective quality control, validation, and standardization, the oral PWB practical examination requires that all selected routes are impacted by adverse weather and/or aeronautical conditions. This ensures a uniform level of difficulty and makes the examination score a reliable indicator of individual performance. Adverse weather and aeronautical conditions are listed and described in Appendix A of this order. The minimum passing score is 70.

(5) The FAA FSSOG evaluator must provide oral comments and feedback during the examination debriefing. At a minimum, the evaluator must identify the reason(s) for any deductions taken. A request for a written evaluation must be submitted to the FAA FSSOG manager for approval. FAA Form 7220-4, Qualification Report (Appendix C), must be forwarded to the flight service facility manager and training coordinator after a candidate completes each evaluation.

(6) If the candidate fails a written PWB test or oral PWB practical examination, the FAA evaluator must discuss the problem area(s) with the candidate and facility manager(s) before scheduling a retake. Facility training will be conducted to the facility manager's satisfaction before a retake is scheduled. The FAA FSSOG must maintain documentation/files on all failures until the student passes.

d. PWB Certification and Flight Plan Areas/Area of Responsibility. The FAA requires pilot weather briefers to have a sufficient understanding of their primary flight plan area (FPA)/ area of responsibility (AOR) in order to efficiently and safely provide PWB services. Candidates must demonstrate a working knowledge of the geography, terrain, and the location of the surface observations and forecasts within the FPA/AOR. The results of the oral examination must be recorded on FAA Form 7220-2, FAA Oral PWB Evaluation Sheet (Appendix B), and entered in the FAA FSSOG database.

e. International PWB Proficiency Check. Briefers that provide pilot weather briefings outside of U.S. airspace (excluding Canada, Mexico, and the Miami AOR) are required to have an international PWB proficiency check. Briefers must score 70 points or higher on an FAA proficiency check based on the elements of the International PWB Checklist Worksheet (Appendix D) before they may conduct international pilot weather briefings. This responsibility requires only supplemental training and no additional certification is required. The results of the proficiency check are documented on FAA Form 7220-4, Qualification Report (Appendix C). Successful completion of the oral evaluation is also noted in the specialist's training record and in the FAA FSSOG database.

8. Quality Assurance. The FAA FSSOG must establish standards and quality control methods for all aspects of the FAA's pilot weather briefing program. Facility site visits (as resources allow), scheduled or anonymous proficiency checks, and reviews of recorded preflight or inflight pilot weather briefings are all ways to accomplish quality control.

a. Proficiency Checks. A proficiency check is an oral evaluation of a certified Pilot Weather Briefer. FAA evaluators are authorized to perform proficiency checks that may result in loss of a PWB CA. Proficiency checks may be conducted by telephone or at the duty station. They may

be scheduled by FAA evaluators or conducted at random by anonymous telephone calls to flight service facilities.

(1) FAA Form 7220-2, FAA Oral PWB Evaluation Sheet (Appendix B), is used to determine the score for a proficiency check. The FSSOG completes FAA Form 7220-4, Qualification Report (Appendix C), and sends it electronically to the facility for their employee training records. Results are also entered into the FAA PWB CA database.

(2) A PWB proficiency check failure results in the suspension of the briefer's PWB CA. During the suspension, the briefer cannot provide any pilot weather briefings at preflight or inflight without the direct supervision of a person holding the valid CA. Remedial training must be conducted in accordance with applicable facility directives before a follow-up oral PWB practical examination is conducted. The FAA FSSOG manager removes the suspension if the briefer passes a follow-up oral PWB practical examination. If the briefer fails the oral PWB practical examination, the briefer's PWB CA will be cancelled.

(3) Proficiency Check Requirements**:** proficiency checks are conducted for any of following reasons:

(a) A PWB CA holder is assigned to a new FPA/AOR where the terrain or prevailing weather regimes are significantly different and/or when the new FPA/AOR has international PWB responsibilities. Flight service facility management must contact the FAA FSSOG Manager immediately when a briefer transfers to a new FPA/AOR. The FAA FSSOG Manager or designee will make a determination if a proficiency check is required.

(b) A PWB CA holder has not provided a pilot weather briefing for more than 6 months (e.g., temporary assignment, extended illness, etc.). A PWB proficiency check must be passed before the CA holder is allowed to brief without the direct supervision of a current PWB CA holder. Facilities must also comply with the provisions for recertification as described in FAA Order JO 3120.4.

(c) As deemed necessary or pertinent by the FAA FSSOG manager.

b. Recordings. The FAA FSSOG Manager may request PWB recordings from any flight service facility. When the request is received, the recordings should be provided to the FAA FSSOG within 5 working days. The FAA FSSOG must provide feedback to the facility manager and/or training specialist(s) within 2 weeks after receipt of the recordings.

9. Certificates of Authority (CA). The FAA FSSOG is the official repository for all FAA PWB CAs. The records are maintained in an electronic database. Backup copies of these certificates are kept on file at the appropriate flight service facilities.

a. PWB CA. The FAA FSSOG Manager issues a PWB CA after the candidate has successfully passed the weather analysis, satellite, and weather radar written certification tests and the oral PWB practical examination. The certificate number and issue date must be entered in the PWB CA database, which resides at the FAA FSSOG.

b. CA Naming Convention. Certification numbers will use the following naming convention:

(1) F, for "FAA."

(2) P, for PWB certificates.

(3) YY, the 2-digit year.

(4) XXX, numbered sequentially, beginning with 001 each calendar year.

EXAMPLE
FP12001

c. Issuing CA.

(1) The FAA FSSOG Manager must issue the appropriate certificate within 10 working days. The certificate must show the date the candidate passed the oral practical examination. Specialists are officially authorized to perform PWB duties without supervision immediately after passing the oral examination.

(2) A copy of each certificate must remain on file and be readily available for inspection by FAA personnel. The flight service facility manager may provide a copy of the certificate to the briefer, if requested. When a briefer is reassigned to a new flight service facility, his/her CA must be forwarded to the new facility.

d. Suspending CA.

(1) The PWB CA is suspended if a briefer fails (scores less than 70) any FAA PWB oral evaluation or proficiency check. FAA Form 7220-4, Qualification Report (Appendix C), is provided to the flight service facility. When a briefer's certificate is suspended, pilot weather briefings cannot be provided at the preflight or inflight position without the direct supervision of a person holding a valid CA.

(2) The flight service facility managers and trainers may obtain training recommendations from the FAA FSSOG. Practical examination(s) may be scheduled after appropriate training is accomplished. The FAA FSSOG Manager removes the suspension if the briefer passes the follow-up practical examination.

e. Cancelling CA. The PWB CA is cancelled if the briefer fails (scores less than 70) the follow-up oral practical examination after his/her certificate has been suspended. An FAA Form 7220-4, Qualification Report (Appendix C), indicating the cancellation is provided to the facility. The facility manager or designee will acknowledge the cancelled CA to the FAA FSSOG Manager within 5 working days.

f. Invalidating CA. When a CA holder retires or terminates employment for any reason, the facility manager must promptly notify the FAA FSSOG Manager and initiate a request to invalidate the PWB CA. The applicable PWB CA database at the FAA FSSOG must be updated to reflect the change, and the record must be retained for 2 years after the invalidation date. A copy of the invalidated CA may be given to retired employees as a personal keepsake.

g. Revalidating CA.

(1) If the certificate has been **invalid for 2 years or less**, recertification must be in accordance with requirements described in FAA Order JO 3120.4. In addition, the specialist must successfully complete an oral practical examination. Flight service facilities must contact the FAA FSSOG to schedule this examination. The FAA evaluator uses FAA Form 7220-3, Oral Evaluation Sheet (Appendix B) to determine the briefer's score. If a passing score of 70 points is achieved, a new CA is issued.

(2) If a PWB certificate has been **invalid for more than 2 years**, recertification must be in accordance with requirements described in FAA Order JO 3120.4. In addition, the specialist must pass all written PWB certification tests (weather analysis, satellite, and weather radar) and an oral PWB practical examination. All tests or examinations must be requested from the FAA FSSOG manager.

10. Maintaining Files. The FAA FSSOG maintains a database of all PWB certificate numbers, issue dates, etc. Flight service facility managers must notify the FAA FSSOG immediately of any changes to their PWB certificate records including name changes, separation from duty, retirements, and changes in flight plan briefing areas/AOR.

11. Distribution. This order is distributed to selected offices in Washington headquarters, regional offices, service area offices, the William J. Hughes Technical Center, the Mike Monroney Aeronautical Center, all air traffic field facilities, international aviation field offices, and interested aviation public.

12. Related Publications.

a. FAA Order JO 7110.10, Flight Services, is the source document for the provision of Pilot Weather Briefing.

b. Advisory Circular 00-45, Aviation Weather Services, is the source document for the use and interpretation of aviation weather products.

c. FAA Order JO 3120.4, Air Traffic Technical Training, is a source document for certification/recertification requirements.

13. Forms and Reports.

a. Pilot Weather Briefing Certification Practical Examination Standards (Appendix A).

b. FAA Form 7220-2, FAA Oral PWB Evaluation Sheet (Appendix B).

c. FAA Form 7220-4, Qualification Report (Appendix C).

d. International Pilot Weather Briefing Checklist (Appendix D).

e. FAA Form 7220-5, Pilot Weather Briefer Certificate (Appendix E).

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NOV 02 2015
Date Signed

Appendix A - Pilot Weather Briefing Certification Practical Test Standards

1. **Pilot Weather Briefer Authority.** Federal Aviation Administration (FAA) air traffic control specialists working at FAA Flight Service Stations (FSS) and Federal Contract Flight Service Station (FCFSS) employees who have a valid Pilot Weather Briefer certificate issued by the NWS or FAA Flight Service Safety and Operations Group (FSSOG) are authorized to perform preflight and inflight pilot weather briefings under general supervision.

2. **Prerequisites.**

   a. The candidate must have passed the NWS or FAA Weather Analysis, Weather Radar, and Weather Satellite written tests within the past two years.

   b. The candidate must have had on the job training with a certified Pilot Weather Briefer within the past six months.

   c. The Air Traffic Manager or designee must request the PWB Practical Examination and state that the candidate is prepared to pass the examination.

3. **Scheduling the PWB Written Test and Oral PWB Practical Examination.**

   a. Facilities wishing to schedule a written test or oral examination must send a request to the FSSOG at the following address: 9-AJR-FSSOG@faa.gov. Requests for both written tests and practical (oral) examinations must be made at least 1 week in advance.

   b. Facilities must supply FSSOG with a point of contact (name, email and telephone) available during normal administrative business hours, and an email address to which qualification reports and certificates of authority must be sent.

   c. Requests for written tests must contain the following information:

      (1) Name of candidate.

      (2) Written test required.

      (3) A statement from the facility manager or designee attesting to the candidate's completion of all prerequisite study and readiness to take the test.

   d. Requests for practical (oral) examinations must contain the following information:

      (1) Name of candidate.

      (2) Type of examination requested and applicable Flight Plan Area (FPA).

      (3) Date/ UTC time requested for examination.

4. **Format of the Oral PWB Practical Examination.**

   a. The practical examination will consist of two preflight standard weather briefings.

      (1) One standard briefing will be for a VFR or IFR flight below FL240

      (2) One standard briefing will be for an IFR flight above FL240.

b. Both of the weather briefings will be for flights departing from airports within the candidate's flight plan area/area of responsibility. However, the destination airport may be any airport.

c. Facilities with international areas of responsibility will have at least one contact within the international area.

d. The candidate must obtain all the required background information for the proposed flight.

e. The candidate must ensure the evaluator is aware of all pertinent adverse conditions.

f. The candidate must provide accurate weather information to the evaluator and use the most current and forecasted weather.

g. The candidate will summarize when appropriate and interpret weather data and forecasts rather than reading information verbatim.

h. The candidate will follow a logical sequence:

(1) Gather appropriate background information.

(2) Provide a synopsis.

(3) Ensure the evaluator is aware of all pertinent adverse conditions.

(4) Provide a VNR statement if appropriate.

(5) Provide current weather conditions.

(6) Provide forecast weather conditions, including the variance between NWS forecasts and current conditions.

(7) Provide winds and temperatures aloft.

(8) Provide NOTAMs.

i. The horizontal limits of pertinent weather and aeronautical information and adverse conditions are normally considered to be 25 nautical miles either side of the proposed route. When determining the pertinence of information, the candidate will take into account the dynamic aspect of weather and aircraft speed. Adverse conditions and weather information observed or forecasted to occur more than 25 nautical miles from the route will be provided if there is a potential for safety of flight to be compromised.

j. The vertical limits of pertinent weather information and adverse conditions are normally considered to be:

(1) The climb out and approach path.

(2) For flights below FL180; from the surface to 5000 feet above the proposed en route altitude.

(3) For flights at or above FL180; from 5000 feet above and below the proposed en route altitude.

5. Weather Situational Awareness.

a. The pre-flight/in-flight PWB position must be ready at any time to receive a request for weather information which may affect the safe outcome of the flight. Therefore, a specialist must be aware of current and forecast weather for large parts of the United States and some international airspace and airports.

b. This weather situational awareness is obtained by reviewing pilot reports, weather radar products, satellite images, weather observations and forecasts, and maintained by updating weather information.

c. PWB specialists must be skilled in quickly reviewing large amounts of weather data and accurately summarizing and interpreting this data verbally to a pilot.

d. Specialists must have a working knowledge of the operational interpretation of weather radar and satellite images and will understand the strengths and limitations of all weather data sources and NWS forecasts.

e. The PWB specialist must be able to filter weather data, forecasts, and hazardous weather information and not give extraneous data to the pilot.

Grading Point Distribution	
Background Information	**5**
Adverse Conditions/VNR Statement	**30**
Synopsis	**5**
Current Conditions	**20**
Forecast Conditions	**20**
Quality Factors	**20**

6. Grading Guidelines for each of the above categories are outlined within each of the specific tasks.

a. The minimum passing score is 70 points.

b. If a PWB candidate fails to inform the evaluator about any individual adverse condition, 30 points will be deducted. Partial information will result in point deductions as specified in each adverse condition task grade guideline.

c. If a passing score of 70 points or greater is achieved on the Oral PWB Practical Examination then:

(1) The FAA Qualification Report will be sent electronically to the candidate's FSS Manager.

(2) An FAA Certificate of Authority will be sent electronically to the candidate's FSS.

(3) Immediately following the debriefing of the practical exam, the PWB candidate is certified to perform PWB duties under general supervision.

d. If a failing score of fewer than 70 points is achieved on the PWB practical exam then:

(1) The candidate will not be certified to perform PWB duties and must continue in a training status.

(2) Facility training will be conducted to the facility manager's satisfaction before the briefer retakes the examination. A retake may not be scheduled sooner than 3 business days following the date of failure, unless approved by the FSSOG manager.

e. Approximately one hour after the conclusion of the Oral Practical Examination, the FAA evaluator will call the FSS and conduct a debriefing. The debriefing may be with the operations manager, candidate, candidate's supervisor, facility training specialist and/or OJT instructor, depending upon their availability.

f. The debriefing will be conducted by the FAA evaluator, along with any other FAA evaluator participating in the evaluation of the practical exam and possibly the FSSOG manager.

g. The debriefing will include:

(1) A statement that the candidate passed or failed the practical exam.

(2) A review of the two briefings including departure airport, altitudes, routes, destinations, ETD, ETA, questions asked, etc.

(3) A review of what the candidate did well and what areas needed improvement.

(4) A summarization of the procedures to follow after a passing or failing score.

h. The FS management, training staff and candidate will listen to the recorded practical exam prior to the debriefing.

7. Background Information.

a. The following background information will be obtained:

(1) Type of flight – IFR or VFR

(2) Aircraft identification.

(3) Aircraft type.

(4) Departure airport.

(5) Estimated time of departure.

(6) En route altitude.

(7) Route of flight.

(8) Destination airport.

(9) Estimated time en route (ETE) or the estimated time of arrival (ETA) at the destination.

b. Grading guidelines.

(1) No points are deducted if all background information is obtained by the PWB candidate for both standard weather briefings.

(2) One (1) point is deducted for each of the above not obtained by the PWB candidate up to a maximum of 5 points.

8. Adverse Conditions.

a. VNR Statement Task.

(1) When VFR flight is proposed and sky conditions or visibilities are present or forecast, surface or aloft, that in the briefer's judgment would make flight under visual flight rules doubtful, the briefer will describe the conditions, affected locations, and advise the evaluator that VFR flight is not recommended.

(2) Correctly uses the following, when appropriate, to determine current and forecast areas of IFR conditions along the proposed route of flight:

(a) METARs.

(b) Satellite.

(c) Radar.

(d) PIREPs.

(e) AIRMET SIERRA.

(f) TAFs.

(g) Center Weather Advisories.

(3) Exhibits sound briefer judgment when a VFR flight is planned and gives a "VFR flight is not recommended" (VNR) statement when flight under VFR is doubtful.

(4) Provides a VNR statement in the Caribbean based on ceilings less than 1500 feet and/or visibilities less than 5 SM.

(5) Does not provide a VNR statement when conditions along the route are expected to be MVFR or better.

(6) Provides VFR alternatives when a VNR statement is issued, if possible.

(7) Grading guidelines.

(a) No points are deducted when an applicable VNR statement is given.

(b) Thirty (30) points are deducted when data indicated VFR flight was doubtful and a VNR statement was not given.

(c) One to four (1-4) points are deducted if a VNR statement was given, but data indicated VFR flight was likely.

(d) Up to 4 points are deducted if a VNR statement was given, but no alternate VFR routing was provided.

b. IFR Task.

(1) Exhibits knowledge of the meteorological conditions where IFR is most likely to occur.

(2) Exhibits knowledge of the hazard of attempting VFR flight into IFR conditions and the increased hazard to IFR flights operating in IMC.

(3) Correctly uses the following, when appropriate, to determine current and forecast areas of IFR conditions along the proposed route of flight:

(a) METARs.

(b) Satellite.

(c) Radar.

(d) PIREPs.

(e) AIRMET SIERRA.

(f) TAFs.

(g) Center Weather Advisories.

(4) For flights below FL180; provides applicable IFR adverse condition information for departure, en route, and destination.

(5) Correctly provides the evaluator complete and accurate information on IFR conditions along the proposed route of flight including:

(a) Location.

(b) Time.

(c) Horizontal extent.

(d) Trend (past and forecast).

(6) Grading guidelines.

(a) No points are deducted if the candidate provides complete and accurate information on the adverse condition applicable to the proposed route of flight.

(b) Thirty (30) points are deducted if the candidate fails to provide the existing or forecast adverse condition applicable to the proposed route of flight.

(c) Ten to twenty five (10-25) points are deducted if partial or inaccurate information concerning the adverse condition was given which may, in the evaluator's assessment, have an impact on the safety of the flight.

(d) Up to 10 points are deducted if partial or inaccurate information concerning the adverse condition was given but the information would not, in the evaluator's assessment, have an impact on the safety of the flight.

c. Mountain Obscurations Task.

(1) Exhibits knowledge of the meteorological conditions where mountain obscuration is most likely to occur.

(2) Exhibits knowledge of the hazard of flying VFR or IFR in areas where the mountains are obscured by weather.

(3) Correctly uses the following, when appropriate, to determine areas where mountains are obscured along the proposed route of flight:

(a) METARs.

(b) Satellite.

(c) Radar.

(d) PIREPs.

(e) AIRMET SIERRA.

(f) TAFs.

(g) Center Weather Advisories.

(4) Correctly provides the evaluator complete and accurate information on IFR conditions along the proposed route of flight including:

(a) Location.

(b) Time.

(c) Horizontal extent.

(d) Trend (past and forecast).

(5) Grading guidelines.

(a) No points are deducted if the candidate provides complete and accurate information on the mountain obscuration applicable to the proposed route of flight.

(b) Thirty (30) points are deducted if the candidate fails to provide the existing or forecast mountain obscuration applicable to the proposed route of flight.

(c) Ten to twenty five (10-25) points are deducted if partial or inaccurate information concerning the mountain obscuration was given which may, in the evaluator's assessment, have an impact on the safety of the flight.

(d) Up to 10 points are deducted if partial or inaccurate information concerning the mountain obscuration was given but the information would not, in the evaluator's assessment, have an impact on the safety of the flight.

d. Thunderstorms Task.

(1) Exhibits knowledge of the meteorological conditions conducive for thunderstorm development.

(2) Exhibits knowledge of thunderstorm types, structure, development, movement, and associated aviation hazards.

(3) Correctly provides the evaluator complete and accurate thunderstorm information applicable to the proposed route of flight including:

(a) Coverage.

(b) Trend.

(c) Type.

(d) Intensity.

(e) Tops.

(f) Movement.

(4) Correctly uses the following, when appropriate, to determine current and forecast areas of IFR conditions along the proposed route of flight:

(a) Radar/Lightning data.

(b) Satellite.

(c) METARs.

(d) PIREPs.

(e) Convective SIGMETs/Convective Outlook.

(f) TAFs.

(g) Area Forecasts.

(h) High and Low Level Significant Weather Prognosis charts.

(i) Severe Thunderstorm/Tornado Watches.

(5) Correctly uses the following, as appropriate, to supplement thunderstorm information:

(a) National Convective Weather Forecast (NCWF) if available.

(b) Severe Thunderstorm/Tornado Warnings.

(6) Grading guidelines.

(a) No points are deducted if the candidate provides complete and accurate thunderstorm information applicable to the proposed route of flight.

(b) Thirty (30) points are deducted if the candidate fails to provide existing or forecast thunderstorm information applicable to the proposed route of flight.

(c) Ten to twenty five (10-25) points are deducted if partial or inaccurate information concerning the thunderstorms was given which may, in the evaluator's assessment, have an impact on the safety of the flight.

(d) Up to 10 points are deducted if partial or inaccurate information concerning the thunderstorms was given but the information would not, in the evaluator's assessment, have an impact on the safety of the flight.

e. Icing Task.

(1) Exhibits knowledge of the meteorological conditions conducive to icing.

(2) Exhibits knowledge of icing as a hazard to aircraft and the effect of icing on aircraft in flight.

(3) Correctly uses the following for information:

(a) SIGMETs for severe icing.

(b) AIRMET ZULU for moderate icing.

(c) Center Weather Advisories (CWA).

(d) PIREPs of ice, temperature, clouds and precipitation.

(4) Correctly uses the following, when appropriate, to determine current and forecast horizontal and vertical extent of ice producing clouds and precipitation:

(a) Radar.

(b) Satellite.

(c) METARs.

(d) TAFs.

(e) Area Forecasts.

(f) CWA.

(5) Correctly uses the following, as appropriate, to supplement current and forecast ice information:

(a) Current and Forecast Icing Product (CIP/FIP) if available.

(b) Freezing level graphics.

(6) Correctly provides the evaluator with complete and accurate icing information applicable to the proposed flight including:

(a) Freezing level.

(b) Temperature.

(c) Vertical extent/Altitudes.

(d) Horizontal extent.

(e) Trend.

(f) Time.

(g) Intensity.

(7) Grading guidelines.

(a) No points are deducted if the candidate provides complete and accurate icing information applicable to the proposed route of flight.

(b) Thirty (30) points are deducted if the candidate fails to provide existing or forecast icing information applicable to the proposed route of flight.

(c) Ten to twenty five (10-25) points are deducted if partial or inaccurate information concerning the icing was given which may, in the evaluator’s assessment, have an impact on the safety of the flight.

(d) Up to 10 points are deducted if partial or inaccurate information concerning the icing was given but the information would not, in the evaluator’s assessment, have an impact on the safety of the flight.

f. Turbulence Task.

(1) Exhibits knowledge of the meteorological conditions conducive to turbulence development.

(2) Exhibits knowledge of turbulence as a hazard to aircraft and the effects of turbulence on aircraft in flight.

(3) Correctly uses the following, when appropriate, to determine turbulence intensities and location:

(a) Turbulence SIGMETs.

(b) AIRMET TANGO.

(c) Center Weather Advisories (CWA).

(d) PIREPs.

(e) Satellite.

(f) Radar.

(g) METARs.

(h) Area Forecasts.

(4) Correctly provides the evaluator with complete and accurate turbulence information applicable to the proposed flight including:

(a) Intensity.

(b) Location.

(c) Vertical extent/Altitudes.

(d) Horizontal extent.

(e) Time.

(5) Grading guidelines.

(a) No points are deducted if the candidate provides complete and accurate turbulence information applicable to the proposed route of flight.

(b) Thirty (30) points are deducted if the candidate fails to provide existing or forecast turbulence information applicable to the proposed route of flight.

(c) Ten to twenty five (10-25) points are deducted if partial or inaccurate information concerning the turbulence was given which may, in the evaluator's assessment, have an impact on the safety of the flight.

(d) Up to 10 points are deducted if partial or inaccurate information concerning the turbulence was given but the information would not, in the evaluator's assessment, have an impact on the safety of the flight.

g. Volcanic Ash Task.

(1) Exhibits knowledge of volcanic ash as a hazard to aircraft and the effects of volcanic ash on aircraft in flight.

(2) Correctly uses the following, when appropriate, to determine volcanic ash intensities and location:

(a) Volcanic ash SIGMETs.

(b) Volcanic Ash Advisories.

(c) PIREPs.

(d) Satellite.

(e) Radar.

(f) METARs/SPECIs.

(g) TAFs.

(h) Significant Weather Prognosis Charts.

(i) ATCCC messages.

(3) Correctly provides the evaluator with complete and accurate volcanic ash information applicable to the proposed flight including:

(a) Horizontal extent/Altitudes.

(b) Vertical extent.

(c) Movement.

(d) Time.

(4) Grading guidelines.

(a) No points are deducted if the candidate provides complete and accurate volcanic ash information applicable to the proposed route of flight.

(b) Thirty (30) points are deducted if the candidate fails to provide existing or forecast volcanic ash information applicable to the proposed route of flight.

(c) Ten to twenty five (10-25) points are deducted if partial or inaccurate information concerning the volcanic ash was given which may, in the evaluator's assessment, have an impact on the safety of the flight.

(d) Up to 10 points are deducted if partial or inaccurate information concerning the volcanic ash was given but the information would not, in the evaluator's assessment, have an impact on the safety of the flight.

h. Dust/Sand Storm Task.

(1) Exhibits knowledge of the meteorological conditions conducive to dust/sand storm development.

(2) Exhibits knowledge of the hazards to aircraft flying in and around dust/sand storms and the effects on aircraft in flight.

(3) Correctly uses the following, when appropriate, for information regarding dust/sand storms:

(a) SIGMETs.

(b) PIREPs.

(c) Satellite,

(d) Radar.

(e) METARs (BLDU, BLSA, DU).

(f) TAFs.

(4) Correctly provides the evaluator with complete and accurate icing information applicable to the proposed flight including:

(a) Horizontal extent.

(b) Vertical extent.

(c) Intensity.

(d) Time.

(5) Grading guidelines.

(a) No points are deducted if the candidate provides complete and accurate dust/sand storm information applicable to the proposed route of flight.

(b) Thirty (30) points are deducted if the candidate fails to provide existing or forecast dust/sand storm information applicable to the proposed route of flight.

(c) Ten to twenty five (10-25) points are deducted if partial or inaccurate information concerning the dust/sand storm was given which may, in the evaluator's assessment, have an impact on the safety of the flight.

(d) Up to 10 points are deducted if partial or inaccurate information concerning the dust/sand storm was given but the information would not, in the evaluator's assessment, have an impact on the safety of the flight.

i. Tropical Cyclone Task.

(1) Exhibits knowledge of the meteorological conditions conducive to the development and persistence of tropical cyclones.

(2) Exhibits knowledge of the hazards to aircraft flying in and around tropical cyclones.

(3) Correctly uses the following, when appropriate, to determine the location, horizontal and vertical extent, and movement of tropical cyclones and associated hazards:

(a) SIGMETs.

(b) AIRMETs.

(c) Tropical Cyclone/Hurricane Advisories.

(d) PIREPs.

(e) Satellite.

(f) Radar.

(g) METARs.

(h) TAFs.

(i) Area Forecasts.

(j) Significant Weather Prognosis Charts.

(4) Correctly provides the evaluator with complete and accurate tropical cyclone information applicable to the proposed flight including:

(a) Horizontal extent.

(b) Vertical extent.

(c) Intensity.

(d) Time.

(e) Movement.

(5) Grading guidelines.

(a) No points are deducted if the candidate provides complete and accurate tropical cyclone information applicable to the proposed route of flight.

(b) Thirty (30) points are deducted if the candidate fails to provide existing or forecast tropical cyclone information applicable to the proposed route of flight.

(c) Ten to twenty five (10-25) points are deducted if partial or inaccurate information concerning the tropical cyclone was given which may, in the evaluator's assessment, have an impact on the safety of the flight.

(d) Up to 10 points are deducted if partial or inaccurate information concerning the tropical cyclone was given but the information would not, in the evaluator's assessment, have an impact on the safety of the flight.

j. High Density Altitude Task.

(1) Exhibits knowledge of the meteorological conditions conducive to high density altitude.

(2) Exhibits knowledge of the hazard to aircraft flying in high density altitude conditions with lower than standard atmosphere altimeter settings (29.92) and higher than standard atmospheric temperatures.

(3) Exhibits knowledge that aircraft service ceilings are based on density altitude when briefing aircraft flying over mountains or through mountain passes.

(4) Exhibits knowledge of increased runway lengths required for takeoffs and landings and decreased climb performance with high density altitude conditions.

(5) Correctly uses the following, when appropriate, to determine turbulence intensities and location:

(a) METARs.

(b) PIREPs.

(c) Temperature aloft forecast.

(6) Provides the evaluator with high density altitude information and provides information to minimize the treat.

Field Elevation (MSL)	High Density Altitude Temperature Threshold (Celsius)		Standard Atmosphere	
			Altitude (MSL)	Temperature (Celsius)
2,000 -2,999	29 or higher		2,000	11
3,000 -3,999	27 or higher		3,000	9
4,000 -4,999	24 or higher		4,000	7
5,000 -5,999	21 or higher		5,000	5
6,000 -6,999	18 or higher		6,000	3
7,000 -7,999	16 or higher		7,000	1

(7) Grading guidelines.

(a) No points are deducted if the candidate provides complete and accurate high density altitude information applicable to the proposed flight.

(b) Thirty (30) points are deducted if the candidate fails to provide existing or forecast high density altitude condition.

(c) Ten to twenty five (10-25) points are deducted if partial or inaccurate information concerning the high density altitude condition was given which may, in the evaluator's assessment, have an impact on the safety of the flight.

(d) Up to 10 points are deducted if partial or inaccurate information concerning the high density altitude condition was given but the information would not, in the evaluator's assessment, have an impact on the safety of the flight.

k. Low-Level Wind Shear Task.

(1) Exhibits knowledge of the meteorological conditions conducive to low-level wind shear.

(2) Exhibits knowledge of the impact to aircraft departing or landing in low-level wind shear conditions.

(3) Correctly uses the following for information on low-level wind shear:

(a) AIRMET TANGO.

(b) PIREPs.

(c) VAD Wind Profiles.

(d) Base reflectivity (0.5 degree) radar products.

(e) TAFs.

(f) Satellite.

(4) For flights below FL180; provides low-level wind shear information for departure, en route and destination and as appropriate.

(5) For flights at or above FL180; provides low-level wind shear information for departure and destination.

(6) Correctly provides the evaluator with complete and accurate low-level wind shear information applicable to the proposed flight including:

(a) Location.

(b) Vertical Extent.

(c) Time.

(7) Grading guidelines.

(a) No points are deducted if the candidate provides complete and accurate low-level wind shear information applicable to the proposed route of flight.

(b) Thirty (30) points are deducted if the candidate fails to provide existing or forecast low-level wind shear information applicable to the proposed route of flight.

(c) Ten to twenty five (10-25) points are deducted if partial or inaccurate information concerning the low-level wind shear was given which may, in the evaluator's assessment, have an impact on the safety of the flight.

(d) Up to 10 points are deducted if partial or inaccurate information concerning the low-level wind shear was given but the information would not, in the evaluator's assessment, have an impact on the safety of the flight.

l. Strong Low-Level Winds Task.

(1) Exhibits knowledge of the meteorological conditions conducive to strong low-level winds.

(2) Exhibits knowledge of the hazards to aircraft departing or landing in strong low-level wind conditions.

(3) Correctly uses the following, when appropriate, to determine the threat of strong low level winds:

(a) AIRMET TANGO.

(b) PIREPs.

(c) VAD Wind Profiles.

(d) 0.5 degree base reflectivity radar products.

(e) METARs.

(f) TAFs.

(g) Area Forecasts.

(h) Satellite.

(4) For flights below FL180; provides strong low-level wind information for departure, en route and destination and for all altitudes below the proposed altitude.

(5) For flights at or above FL180; provides strong low-level wind information for departure and destination.

(6) Correctly provides the evaluator with the following information on the strong low-level winds:

(a) Horizontal extent.

(b) Vertical extent.

(c) Time.

(7) Grading guidelines.

(a) No points are deducted if the candidate provides complete and accurate strong low-level wind information applicable to the proposed route of flight.

(b) Thirty (30) points are deducted if the candidate fails to provide existing or forecast strong low-level wind information applicable to the proposed route of flight.

(c) Ten to twenty five (10-25) points are deducted if partial or inaccurate information concerning the strong low-level wind was given which may, in the evaluator's assessment, have an impact on the safety of the flight.

(d) Up to 10 points are deducted if partial or inaccurate information concerning the strong low-level wind was given but the information would not, in the evaluator's assessment, have an impact on the safety of the flight.

m. Adverse Aeronautical Information Task.

(1) Provides NOTAMs that could influence the evaluator to alter the proposed flight; i.e., airport/runway closures.

(2) Provides air traffic delays/airspace restrictions that could influence the evaluator to alter the proposed flight; i.e., Temporary Flight Restrictions, Restricted or Prohibited Areas, Special Flight Rules Zone.

(3) Grading Guidelines.

(a) No points are deducted if the adverse aeronautical information is completely provided.

(b) Thirty (30) points are deducted if the candidate fails to provide adverse aeronautical information applicable to the proposed route of flight.

(c) Ten to twenty five (10-25) points are deducted if partial or inaccurate information concerning the adverse aeronautical information was given which may, in the evaluator's assessment, have an impact on the safety of the flight.

(d) Up to 10 points are deducted if partial or inaccurate information concerning the adverse aeronautical information was given but the information would not, in the evaluator's assessment, have an impact on the safety of the flight.

n. Synopsis Task.

(1) Exhibits sound meteorological knowledge of:

(a) Fronts.

(b) Air mass type.

(c) Pressure patterns at surface and aloft.

(2) Correctly uses the following, when appropriate, to summarize weather information to the evaluator:

(a) Surface analysis chart.

(b) Area Forecast Synopsis.

(c) Satellite.

(d) Radar.

(e) Significant Weather chart.

(f) Surface Prognosis chart.

(g) Aviation Forecast Discussion.

(h) Upper Air Analysis charts

(3) Provides the evaluator with an accurate overview of weather features impacting the route of flight, including:

(a) Location and movement of fronts.

(b) Air mass type, including moisture and stability.

(c) Pressure patterns, surface and aloft.

(4) Grading guidelines.

(a) No points are deducted if the candidate provides complete and accurate synopsis information applicable to the proposed route of flight.

(b) Five (5) points are deducted if the candidate fails to provide the evaluator with a synopsis for either of the two standard weather briefings.

(c) One to five (1-5) points are deducted if the candidate provides incomplete or inaccurate synopsis information.

o. Current conditions Task.

(1) Exhibits sound meteorological knowledge of weather data for providing current conditions applicable to the proposed route of flight.

(2) Correctly uses the following as appropriate, to provide current conditions along the route of flight.

(a) METARs.

(b) PIREPs.

(c) Satellite.

(d) Radar.

(3) Correctly provides the evaluator with the departure airport METAR, or closest available METAR.

(4) Correctly provides the evaluator with an accurate and concise summary, when appropriate, of the following current/recent past en route weather conditions:

(a) Clouds.

(b) Coverage.

(c) Trend.

(d) Tops.

(e) Type.

(5) Visibilities and associated restrictions/weather.

(6) Precipitation:

(a) Coverage.

(b) Trend.

(c) Intensity.

(d) Tops.

(e) Type.

(f) Movement.

(7) Correctly provides the evaluator with the destination airport METAR, or closest available METAR.

(8) Correctly provides the evaluator with pertinent NOTAMs (departure, enroute, and destination).

NOTE:
NOTAMs that could influence the evaluator to alter the flight will be evaluated under Adverse Conditions.

(9) Grading guidelines.

(a) No points are deducted if the candidate provides complete and accurate information on current conditions applicable to the proposed route of flight.

(b) Twenty (20) points are deducted if the candidate fails to provide the evaluator with current conditions for either of the two standard weather briefings.

(c) Up to 20 points are deducted if the candidate provides incomplete or inaccurate current conditions.

p. Forecast Conditions Task.

(1) Exhibits sound meteorological knowledge of NWS forecast products.

(2) Correctly uses the following as appropriate, to provide forecast conditions along the route of flight:

(a) Area Forecast.

(b) TAFs.

(c) Surface prognosis charts.

(d) Low/High Level Significant Weather Prognosis charts.

(3) Correctly provides the evaluator with the departure airport TAF, or applicable forecast, including forecast conditions for climb out.

(4) Correctly provides the evaluator with an accurate and concise summary, when appropriate, of the following elements forecast along the proposed route of flight:

(a) Clouds.

(b) Coverage.

(c) Trend.

(d) Tops.

(e) Type.

(f) Visibilities and associated restrictions/weather.

(g) Precipitation.

(1) Coverage.

(2) Tops.

(3) Type.

(4) Movement.

(5) Correctly provides the evaluator with the destination airport TAF/Area Forecast, including forecast conditions for descent.

(6) Correctly provides winds and temperatures aloft.

(7) Provides when appropriate the variance between NWS forecasts and current conditions.

(8) Grading guidelines.

(a) No points are deducted if the candidate provides complete and accurate information on forecast conditions applicable to the proposed route of flight.

(b) Twenty (20) points are deducted if the candidate fails to provide the evaluator with forecast conditions for either of the two standard weather briefings.

(c) Up to 20 points are deducted if the candidate provides incomplete or inaccurate forecast conditions.

q. Quality Factors.

(1) Conveys competence. Possesses and projects comprehensive knowledge that includes but is not limited to:

(a) Principles of meteorology.

(b) Aviation weather products.

(c) Weather impacts on aircraft operations.

(d) NAS operations.

(e) Aircraft types and associated flight characteristics.

(2) Uses an adequate pace and voice.

(a) An adequate pace varies according to the information being provided; i.e., speech rate when describing fronts and pressure systems may be faster than the rate when reading specific observations upon request.

(b) An adequate voice is loud enough to be easily understood, yet does not cause the listener to hold the phone away from his/her ear.

(3) Is courteous and professional.

(a) Uses polite and respectful language.

(b) Uses standard phraseology.

(4) Follows a logical sequence.

(a) The pilot weather briefing section of FAA JO 7110.10 provides guidance on logical sequence.

(b) The sequence of first three items; adverse conditions, VNR statement and synopsis may be adjusted for emphasis or logic per FAA JO 7110.10.

(5) Provides an accurate weather picture.

(a) Weather symbols and textual contractions are correctly decoded and explained.

(b) Geographic features and political boundaries are correctly described.

(6) Conveys information clearly.

(a) Differentiates between AGL and MSL when appropriate.

(b) Standard phraseology and meteorological terms are used.

(c) Slang and informal speech are avoided.

(7) Conveys information concisely.

(a) Information provided only relates to the route, altitude, and duration of flight.

(b) Translates, interprets and summarizes.

(8) Anticipates the evaluator's needs for specific weather information. These needs vary with:

(a) Evaluator experience.

(b) Aircraft capabilities and equipage.

(c) Flight rules.

(9) Answers the evaluator's questions.

(10) Exhibits knowledge of the topographic effects on weather.

(a) Effect of water surfaces on development of precipitation and low clouds.

(b) Upslope winds and adiabatic cooling.

(11) Grading guidelines.

(a) No points are deducted if all of the quality factors are completely met.

(b) One to twenty (1-20) points are deducted based on the number and severity of the Quality Factors deficiencies demonstrated by the candidate.

Appendix B. FAA Form 7220-2, FAA Oral PWB Evaluation Form

FAA ORAL PWB EVALUATION SHEET			Briefer
Type of Eval	Date/Time	Station	Evaluator
FPA	Test Scores	Sup. POC	
Route-Low Level	Route – High Level		Debrief Phone #

1. Background Information	Max Score	Score	2. Briefing Content	Max Score	Score	3. Quality Factors	Max Score	Score
Type of Flight Aircraft ID Aircraft Type Departure Point Route of Flight Destination Altitude Time of Departure Time En Route	5		Adverse Conditions	30		Conveys competence Adequate pace and voice Courteous and professional Logical sequence Ability to provide accurate weather picture Information conveyed clearly Information conveyed concisely Ability to anticipate pilot's needs Answers evaluator's questions Topographic effects on weather	20	
			Synopsis	5				
			Current Conditions	20				
			Forecast Conditions	20				
Score	5		Score	75		Score		
MINIMUM PASSING SCORE = 70%						SCORE FOR THIS EVALUATION		

BREAKDOWN INFORMATION

Background Information	
Briefing Content	
Adverse Conditions	
Synopsis	
Current Conditions	
Forecast Conditions	
Quality Factors	
Debrief Notes	
Debrief Participants	

FAA Form 7220-2 (10-12) Electronic Version

Appendix C. FAA Form 7220-4 Qualification Report

QUALIFICATION REPORT

To:

Through:

From: Steven Villanueva. Manager
Flight Services, Safety and Operations Group
Federal Aviation Administration
800 Independence Avenue SW
Washington, DC 20591

Signature: Steven Villanueva Date

I – RECORD OF WRITTEN TEST

	Score	Date	Passed / Failed
Weather Analysis			
Satellite			
RADAR			
EFAS			

II – RECORD OF ORAL EXAMINATION

Type of Examination: PWB ☐ IPWB ☐ EFAS ☐

	Score	Date	Passed / Failed
Certification			
Re- Certification			
Proficiency Check			

III - STATUS OF QUALIFICATIONS

Appendix D

INTERNATIONAL PILOT WEATHER BRIEFING CHECKLIST

Use in conjunction with FAA PWB Oral Evaluation Sheet

1. **Advisory Statement** – "Check data as soon as practical after entering foreign airspace, as our international data may be inaccurate or incomplete." _____

2. **Adverse Conditions**
   - **a.** Tropical Cyclone Advisory _____
   - **b.** Volcanic Ash Advisory _____
   - **c.** SIGMETs/Convective SIGMETs _____
   - **d.** AIRMETs _____
   - **e.** Cumulonimbus Clouds _____
   - **f.** Aeronautical Information _____

3. **Current Weather**
   - **a.** Fronts and Pressure Systems _____
   - **b.** METARs _____
   - **c.** RADAR Imagery _____
   - **d.** Satellite Imagery _____
   - **e.** PIREPs/AIREPs _____

4. **Forecast Weather**
   - **a.** Significant Weather Prognostic Charts _____
   - **b.** Area Forecast _____
   - **c.** TAFs _____
   - **d.** Jetstream _____
   - **e.** Tropopause Heights _____
   - **f.** Winds and Temperatures Aloft _____

5. **NOTAMs**
   - **a.** Aerodrome _____
   - **b.** Airspace _____
   - **c.** NAVAIDS_____

Certificate of Authority
for
Pilot Weather Briefing

This document certifies that

_____

is authorized
to conduct Pilot Weather Briefing duties in accordance with
Federal Aviation Administration directives.

Certificate Number _____

Issuance Date _____

Jeanne Giering
Director

Steven Villanueva
Manager

Federal Aviation Administration
Washington, DC