

CEN23MA034

**OPERATIONAL FACTORS/HUMAN PERFORMANCE**

Attachment 12

FAA 8900.1 CHG 694 Vol. 3 [Excerpts]

November 22, 2023

**VOLUME 3 GENERAL TECHNICAL ADMINISTRATION****CHAPTER 6 ISSUE A CERTIFICATE OF WAIVER OR AUTHORIZATION FOR AN AVIATION EVENT****Section 1 Issue a Certificate of Waiver or Authorization for an Aviation Event****3-141 PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.**

**A. Issue Certificate of Authorization (CoA).** Enter “1220” in the “Activity Code” field of the PTRS record and enter “PA” in the “National Use” field if the CoA was issued for parachute demo and “RL” for rocket launch.

**B. Issue Certificate of Waiver (CoW).** Enter “1230” in the “Activity Code” field, and in the “National Use” field of the PTRS record, enter “BE” for balloon event, “AS” for air show, “AR-XC” for a cross-country air race or “AR-CC” for closed-course air race, “UAS” for Unmanned Aircraft Systems (UAS) demonstrations, “FO-M” for Flyover military.

NOTE: This chapter does not address or include aerobatic competitions or aerobatic practice areas (APA) (see Volume 3, Chapters 5 and 9). Aerobatic competitions are typically conducted in an exclusive environment; the general public is not invited.

**C. Complete DD Form 2535, Request for Military Aerial Support.** Enter “1231” in the “Activity Code” field and enter “CoW/AI” for Certificate of Waiver or Authorization (CoW/A) issued or “NCoW/A” for no CoW/A issued, entered into the “National Use” field, and note in comments if “unsatisfactory,” “satisfactory,” or “conditional satisfactory,” as appropriate.

NOTE: The reference to “military” includes the following U.S. Armed Forces branches: Air Force, Army, Coast Guard, Marine Corps, and Navy.

**D. Complete Aviation Event Flight Standards District Office (FSDO) Checklist.** The inspector-in-charge (IIC) must complete the applicable sections of the Aviation Event FSDO Checklist (available on the Federal Aviation Administration (FAA) National Aviation Events Program website at <https://www.faa.gov/about/initiatives/airshow/>) as you progress through the issuance of a CoW or CoA process. When each portion of the checklist is completed, place in the FSDO file. When you finish conducting the surveillance of the aviation event you will complete the remainder of the checklist and return it to the FSDO file (see Figure 3-202, Sample Aviation Event FSDO Checklist).

**3-142 OBJECTIVE.**

**A. Task.** This section’s task is to determine whether to issue FAA Form 7711-1, Certificate of Waiver or Authorization, to an applicant for an aviation event. Completion of this task results in the issuance of a CoW or CoA or the disapproval of FAA Form 7711-2, Application for Certificate of Waiver or Authorization. FAA Form 7711-2 and FAA Form 7711-1 are multipurpose forms. It should be noted that for aviation events a CoW and a

CoA (FAA Forms 7711-2 and 7711-1) should be processed independently of one another, not combined. See the flowchart below (Figure 3-23, CoW/A Issuance and Oversight Procedures Flowchart) for the issuance of a CoW/A and oversight procedures.

NOTE: Appropriate CoW/As or Letters of Authorization (LOA) in the Web-based Operations Safety System (WebOPSS) may be used in lieu of FAA Form 7711-1. See subparagraph 3-158G for more information.

NOTE: See Figure 3-26, Timelines and Coordination for an Application for Certificate of Waiver or Authorization, for more information. The referenced timelines in subparagraph 3-142B are authorized by this policy to supersede the 45-day timeline requirement referenced on FAA Form 7711-2.

**B. Timelines and Coordination for an Application for CoW/A.** The event organizer must submit applications (FAA Form 7711-2) for a CoW for air shows, balloon events, or air races at least 90 days before the date of the event; 120 days is recommended. An application for a flyover (military) should be submitted 45 days before the date of the event. Approval of the application will be completed only after the event organizer has met all requirements. Within 30 days of receipt by the FSDO, the FSDO must notify the event organizer of any discrepancies or omissions. Notification of approval or disapproval must be completed 30 days prior to the event. It is preferable the CoW be issued 30 days prior to the aviation event. In all cases, all approved CoWs must be issued at least 15 days prior to the aviation event.

1) Submit applications (FAA Form 7711-2) for CoA for a parachute demonstration made over or into a congested area or open-air assembly of people at least 10 business-days before an event. Completion of an application's approval or disapproval must be done within 5 business-days of receipt by the FSDO. All approved CoAs must be issued at least 5 business-days prior to the requested parachute demonstration.

2) Submit applications (FAA Form 7711-2) for a CoA for a rocket launch at an aviation event to the jurisdictional Air Traffic Organization (ATO) facility at least 120 days prior to the aviation event. This CoA is processed in accordance with Title 14 of the Code of Federal Regulations (14 CFR) part 101 and coordinated through ATO and the Office of Commercial Space Transportation (AST). Adhering to timelines is necessary to allow for a safety analysis to be conducted by AST and ATO to process the CoA for a rocket launch. All approved CoAs for a rocket launch must be issued by ATO and submitted to the FSDO at least 30 days prior to the aviation event where the launch will be conducted.

3) Direct event organizers requesting a UAS (public or civil) demonstration or operation at an aviation event to the FAA National Aviation Events Program website at <https://www.faa.gov/about/initiatives/airshow/> for detailed procedures at least 120 days prior to the aviation event. All required documents for UAS demonstrations or operations at an aviation event must be issued and submitted to the FSDO at least 30 days prior to the aviation event.

4) Submit applications (FAA Form 7711-2) for an APA or Aerobatic Competency Evaluation/Practice (ACE/P) operation:

a) For short-term (less than 30 days in duration) aerobatic practice areas (STAPA), at least 60 days prior to the aviation event. Approval of the application should be completed by the assigned General Aviation (GA) Operations aviation safety inspector (ASI)/IIC only after the event organizer or sponsor has met all requirements. Within 30 days of receipt by the FSDO, the FSDO must notify the event organizer or sponsor of any discrepancies or omissions. Thirty days prior to the event, the event organizer must be notified of approval or disapproval, or issuance of the CoW. All approved CoWs should be issued at least 15 days prior to the aviation event or the date requested.

b) For long-term (more than 30 days and less than 36 months in duration) aerobatic practice areas (LTAPA), at least 90 days before date requested or, for renewals, the expiration date on a current CoW. Approval of the application will be completed by the assigned GA Operations ASI/IIC only after the event organizer or sponsor has met all requirements. Within 30 days of receipt by the FSDO, the FSDO must notify the event organizer or sponsor of any discrepancies or omissions. Thirty days prior to the event, the event organizer must be notified of approval or disapproval, or issuance of the CoW. All approved CoWs should be issued at least 15 days prior to the date requested or the date the current CoW expires.

1. LTAPAs require environmental considerations in accordance with FAA Order 1050.1, Environmental Impacts: Policies and Procedures. Submit the Environmental Information Document (EID) (found at [https://www.faa.gov/about/initiatives/airshow/media/EID\\_fillable.pdf](https://www.faa.gov/about/initiatives/airshow/media/EID_fillable.pdf)) with the application (FAA Form 7711-2) at least 90 days prior to either the date requested or the expiration date on the current CoW.

2. The FSDO will submit the EID to the General Aviation Operations Branch within 15 business-days of receipt. Response to the FSDO on the status of an EID should be completed 30 days prior to the date requested or the date the current CoW expires.

c) There are multiple steps leading up to the issuance of a CoW for an ACE/P to the Recognized Industry Organization (RIO). Those steps are not included in the timeline referenced in Figure 3-26. The applicant should see the requirements established in Volume 3, Chapter 9, Section 1.

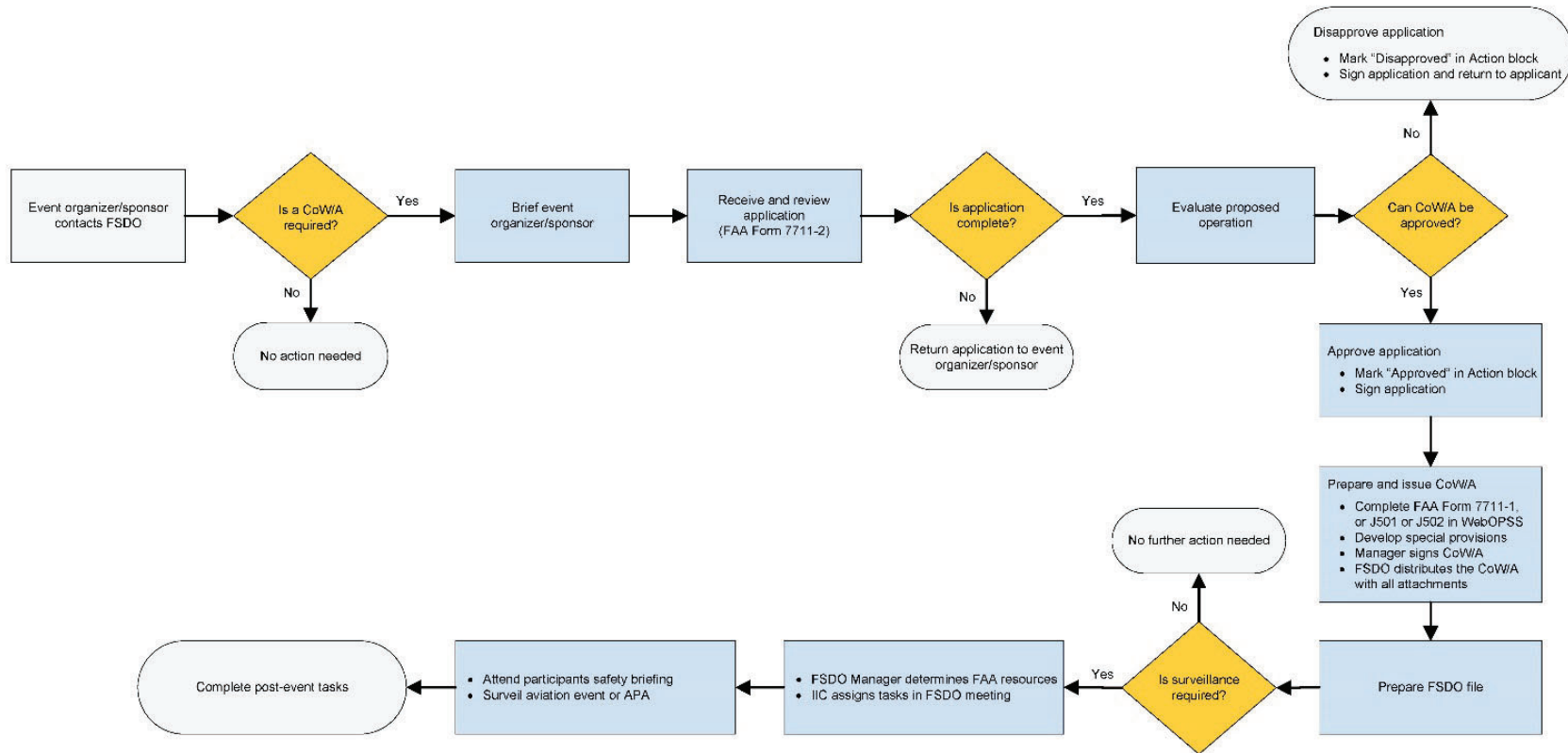
1. At least 15 days before the requested date of the ACE/P operation, the General Aviation Operations Branch issues a CoW for the ACE/P operation and accepts the ACE/P Operations Manual.

2. The authorized ACE/P aerobatic competency evaluator (ACE) submits the Plan of Activities (POA), ACE/P Operations Manual, and ACE/P CoW to the FSDO at least 10 business-days before the requested date of the ACE/P operation. This deadline may be reduced to 3 business-days with FSDO concurrence.

3. The FSDO documents any discrepancies and coordinates with the ACE/P ACE who submitted the POA to resolve them. No further action is necessary if no discrepancies are identified.

NOTE: Direct the event organizer to the responsible FSDO at [https://www.faa.gov/about/office\\_org/field\\_offices/fsdo/](https://www.faa.gov/about/office_org/field_offices/fsdo/).

Figure 3-23. CoW/A Issuance and Oversight Procedures Flowchart



**3-143 DEFINITIONS.** Many terms used in this chapter are unique to aviation events; therefore, the following definitions should enhance the understanding of their application:

NOTE: Where they appear in this section, the terms “Aircraft Rescue and Fire Fighting (ARFF),” “Crash, Fire and Rescue,” “Emergency Medical Services (EMS),” and “Law Enforcement/Security (LE/S)” are used to refer generically to the corresponding capabilities.

**A. Aerobic Box.** The airspace within the demonstration area and flying display area at an air show where participating aircraft are authorized to perform aerobic maneuvers appropriate to their category (see Figure 3-27, Air Show Fly Zones Relative to Airspace). This box defines the appropriate Category I/II/III show line (Figures 3-33–3-37 and Figures 3-38–3-41) and begins at the surface. Aerobatics performed outside of the aerobic box are limited to repositioning maneuvers defined in subparagraph 3-148J.

**B. Aerobic Flight.** When participating in accordance with the provisions of a CoW for an aviation event, single and formation aircraft are defined as aerobic maneuvering when the pitch attitude of that aircraft is greater than 60 degrees above or below the horizon and/or the angle of bank is greater than 75 degrees in reference to the horizon. The definition in 14 CFR part 91, § 91.303 does not apply. Therefore, an event organizer should always include a request to waive the applicable portion(s) of § 91.303 that defines aerobic flight in their request for a CoW.

**C. Air Boss.** The individual who, under operational authority delegated to him or her by the responsible person, has primary responsibility for control of air show operations (does not include transient or nonparticipating aircraft) on the active taxiways, runways, and the air show demonstration area for coordination with the jurisdictional air traffic control (ATC) facility and the IIC while the CoW and associated Class D Notice to Airmen (NOTAM) or temporary flight restriction (TFR) is in effect. The air boss is responsible for the documentation of procedures between ATC and the air boss establishing the transition of airspace and control of participating and nonparticipating aircraft. The air boss is delegated the primary responsibility for preparation and presentation of a daily Participants Safety Briefing.

**D. Air Boss Letter of Authorization (LOA).** A valid FAA air boss LOA, issued by the FAA in accordance with Volume 5, Chapter 9, Section 6, to a recognized air boss at an aviation event (air show only) delegated primary responsibility for control of air show operations after demonstrating competency to an industry air boss evaluator (ABE) authorized under an FAA-accepted Air Boss Recognition Program (ABRP). FAA RIOs that developed the ABRP will provide internet access to a current list of ABEs and recognized air bosses issued an LOA. (Refer to the FAA National Aviation Events Program website at <https://www.faa.gov/about/initiatives/airshow/> for a link.)

NOTE: After January 1, 2019, prior to acting as an air boss at an air show issued a CoW, an air boss designated for an air show must comply with the phased documentation procedures for the issuance of an FAA air boss LOA established on the FAA National Aviation Events Program website at

<https://www.faa.gov/about/initiatives/airshow/>. After January 1, 2020, an air boss must be issued a current and valid LOA and must attach a copy of the LOA to the FAA Form 7711-2 for the event.

**E. Air Race (Cross-Country and Closed-Course).** An aviation event that involves two types of competitive air racing:

1) A closed-course race at a specific location defined by pylons placed on the racecourse (e.g., National Championship Air Race (NCAR) or Red Bull Air Race (RBAR)); or

2) A cross-country race with pre-set checkpoints along the racecourse route (e.g., Air Race Classic).

NOTE: An applicant (except UAS operated under part 101 or part 107) for a closed-course air race must be FAA accredited in accordance with the requirements established in Volume 3, Chapter 6, Section 2 prior to issuance of a CoW for an air race. UAS operated under part 101 or part 107 do not require a CoW for an aviation event when conducting a closed-course air race.

**F. Air Show.** An aviation event defined as an aerial demonstration/performance by one or more aircraft, which may also include a UAS, rocket, parachutist, or ultralight vehicle, before an invited assembly of persons. A rocket launch, parachute or UAS (civil or public) demonstration held in conjunction with an air show must be issued a CoA.

**G. Airworthiness Certificate.** For the purpose of this chapter, the terms “airworthy” or “Airworthiness Certificate” refer to more than just the United States and International Civil Aviation Organization (ICAO) Member States’ standard airworthy aircraft. For a U.S.-registered experimental aircraft this would be a Special Airworthiness Certificate, which must be accompanied by operating limitations. Foreign-registered experimental aircraft must be operated in accordance with Chapter V of the Convention on International Civil Aviation, 14 CFR part 375 subpart B, and § 91.203(a)(1): “No person may operate a civil aircraft of foreign registry unless it contains current certificates of registry and airworthiness (standard) issued or rendered valid by the country of registry, or a special flight authorization issued in accordance with § 91.715,” allowing aviation event operations in U.S. airspace. Refer to FAA Order 8130.2, Airworthiness Certification of Aircraft, for issuance of an aviation event special flight authorization and the FAA National Aviation Events Program website at <https://www.faa.gov/about/initiatives/airshow/> for the expanded procedure.

**H. Altimeter Setting.** Many performers, racers, and jump aircraft may wish to set their altimeters to zero while on the ground to measure height above ground during their performance. This may require a waiver of § 91.121. The IIC should waive § 91.121 for any event where aircraft involved in that event are departing from a runway at that location. This does not require the affected aircraft to set their altimeter(s) to zero but gives the pilot the option to do so.

**I. Approved Maneuver.** A General Aviation and Commercial Division-approved maneuver or a series of maneuvers. These may include flight over the designated spectator area(s) below 1,000 feet above ground level (AGL), higher speeds for military airplanes, or a

maneuver that may involve energy directed at the primary spectator area that meets safety criteria for an air show (see subparagraph 3-148L).

**J. Aviation Event.** Aviation events include air shows, aerobatic competitions, closed-course air races, cross-country air races, parachute demonstrations, balloon events, flyovers, and fly-ins conducted before an invited assembly of persons, for which the FAA issues a CoW or CoA or determines no further action is needed.

NOTE: This chapter does not address or include aerobatic competitions or APAs (see Volume 3, Chapters 5 and 9).

NOTE: This chapter does not include policy for civilian flyovers (see Volume 3, Chapter 12, Section 5).

**K. Aviation Event Demonstration Area.** The total airspace (lateral and vertical limits) identified by the CoW/A, TFR, or the NOTAM issued for an aviation event (sometimes referred to as the waived airspace). (See Figure 3-28, Example of an Air Show Demonstration Area.)

**L. Aviation Event Maneuvering.** Maneuvers performed while participating in accordance with the provisions of a CoW for an aviation event. Maneuvers performed at an aviation event require different levels of endorsement and are categorized and defined below.

NOTE: Military pilots require command approval and the applicable level of FAA approval (see paragraph 3-149).

**1) Aerobatic Maneuvering.** Requires a Statement of Aerobatic Competency (SAC) with an aerobatic maneuvering endorsement for civilian pilots (see subparagraph 3-146B).

a) In a solo flight, aerobatic maneuvering is when the pitch attitude of the aircraft is greater than 60 degrees above or below the horizon and/or the angle of bank is greater than 75 degrees in reference to the horizon.

b) In a formation flight, aerobatic maneuvering is when the pitch attitude of an aircraft is greater than 60 degrees above or below the horizon and/or the bank angle is greater than 75 degrees to the horizon.

**2) Dynamic Maneuvering.** Requires a SAC with a dynamic maneuvering endorsement for civilian pilots (see subparagraph 3-146B).

a) In a solo flight, dynamic maneuvering includes abrupt maneuvering, crossing maneuvers, and opposing maneuvers. The pitch and bank limitations are when the pitch attitude of the aircraft is less than or equal to 60 degrees above or below the horizon and/or the bank angle is less than or equal to 90 degrees in reference to the horizon.

b) In a formation flight, dynamic maneuvering includes formation separation, formation configuration/position changes, rejoins, crossing maneuvers, and opposing maneuvers. The pitch and bank limitations are when the pitch attitude of the aircraft is less than or equal to