Explanatory Statement

Civil Aviation Safety Regulations 1998

Manual of Standards Part 172 Amendment (No. 1) 2011

Purpose
The purpose of *Manual of Standards Part 172 Amendment (No. 1) 2011* (the ***MOS amendment***) is principally twofold: (a) to introduce air traffic control (***ATC***) procedures for protecting aircraft conducting low visibility operations; and (b) to make a number of editorial corrections to the Manual of Standards (MOS) — Part 172.

Legislation
Subsection 98 (1) of the *Civil Aviation Act 1988* (the ***Act***) provides that the Governor-General may make regulations for the purposes of the Act and in the interests of the safety of air navigation.

Some of these regulations are contained in the *Civil Aviation Safety Regulations 1998* (***CASR 1998***). In particular, Part 172 of CASR 1998 deals with, among other things, air traffic services (***ATS***) for the safe use and management of airspace.

Under subregulation 172.022 (1) of CASR 1998, CASA may issue a Manual of Standards (***MOS***) for Part 172 setting out various standards for ATS. Under paragraph 172.065 (1) (a), an ATS provider must ensure that the ATS it provides are in accordance with the standards set out in the MOS.

CASA has issued Manual of Standards (MOS) — Part 172 ***(the MOS***). The MOS relevantly includes Chapter 10, Standards for the Provision of ATS, Chapter 11, Information Provided to Pilots, and Chapter 12, Information Transfer.

Related instruments
Manual of Standards Part 172 Amendment Instrument (No. 1) 2011 (the ***MOS amendment***) amends the MOS. It is 1 of a package of 4 inter-related instruments dealing with low visibility operations arising from the same background, the other 3 being a determination of meteorological minima, a MOS Part 139 amendment and a MOS Part 173 amendment.

Background
In October 2007, CASA commenced Project AS 07/13 – Regulation of Low Visibility Operations. The objective of the project was to develop appropriate requirements and guidelines for the conduct in Australia of aircraft operations in conditions of reduced cloud ceiling or low visibility. The project reviewed local and international standards, consulted with industry and made recommendations for developing safe standards for low visibility operations.

Discussion Paper 0805AS – Low Visibility Operations in Australia (the ***DP***) was published on 4 August 2008. It introduced 28 proposals covering aircraft operations, aerodrome and ATC operations, instrument flight procedure design, aeronautical information services, and associated CASA approval processes. Significant proposals included:

- alignment of flight operational requirements (aerodrome infrastructure like lighting and markings) with standards for such infrastructure

- raising the existing take-off visibility minimum for aircraft at non-controlled aerodromes from 500 m to 800 m; but with the provision for operators to take off in visibility conditions of not less than 550 m in certain circumstances.
- establishing ICAO-conforming Precision Approach Category II and Category III minima for use at suitably equipped aerodromes by approved aircraft operators
- adopting a number of ICAO standards for aerodrome infrastructure for low visibility operations.

Following consultations on the DP, on 12 December 2009 CASA released Notice of Proposed Rule Making (NPRM) 0906AS – IFR minima and low visibility operations (the ***NPRM***). The NPRM formally notified CASA's intention to implement the majority of the proposals introduced by the DP, including:

- aligning aircraft operational approvals and aerodrome infrastructure requirements around trigger visibility criteria of 800 m, 550 m and 350 m
- for future CASRs relating to air transport operations (such as Parts 121, 133 and 135), amending the existing proposal for approach bans so that:
  - the approach ban "limit" would be standardised, for both precision and non-precision approaches, at the point the aircraft descends through 1 000 ft above aerodrome level; and
  - a runway visibility assessment, in addition to an RVR or meteorological visibility report, may be used by a pilot to make the decision to continue or discontinue an approach
- adopting the revised ICAO visibility minima for Precision Approach Categories II, IIIA and IIIB
- establishing closer alignment between Australian aerodrome infrastructure requirements and ICAO Standards and Recommended Practices (***SARPs***) with respect to operations in visibility conditions of less than 800 m
- permitting approach light systems with either distance coded centreline or Barrette centreline configurations, as detailed in ICAO Annex 14 — Aerodromes
- adopting ICAO standards for runway touchdown zone markings and aiming point markings
- promulgating a Civil Aviation Advisory Publication (CAAP) to assist aircraft operators in applying for permission to conduct low visibility operations.

CASA received 10 responses to the NPRM and, in general, the proposals received a favourable response. The next step in the amendment process was the authorisation of changes to the relevant legislative documents. This Explanatory Statement covers changes to the MOS.

Key features of specific changes to the MOS amendment and their impact

A ATC Implementation of low visibility procedures

A new standard is introduced which requires ATC to implement low visibility procedures (***LVP***) if:

(a) the visibility on any part of the aerodrome is insufficient for ATC to exercise control over all traffic on the basis of visual surveillance; or

(b) the cloud ceiling is less than 200 ft; or

(c) the visibility on any part of the aerodrome is less than 800 m.

Impact
No significant impact is expected on operations at controlled aerodromes because the standard merely formalises existing practice. A similar standard will be introduced in MOS Part 139 – Aerodromes. The reason for introducing the 2 standards is to ensure a coordinated response to low visibility conditions between ATS providers and aerodrome operators.

B. Protection of ILS critical and sensitive areas

Instrument landing system (***ILS***) localiser and glide slope courses can be deflected and disrupted when aircraft or vehicles are operated near the respective localizer or glide slope antennae. To prevent these disturbances, critical areas are established around each localizer and glideslope antenna. The ICAO standard is for aircraft and vehicles to be kept outside these critical areas whenever the ILS is in use.

However, many ILS installations at Australian aerodromes are located closer to runways and taxiways than would otherwise be desirable, resulting in ILS critical areas sometimes overlapping runway and taxiway surfaces. In many cases, it is impossible for ATC to maintain the integrity of these critical areas without severely constraining the use of that runway or taxiway.

To reduce the overall impact on aerodrome movement rates, Australia has, for many years, used the FAA practice of limited critical area protection. Under this system, ATC is not required to protect ILS critical areas in good weather conditions. In conditions of poor visibility, ATC is only required to protect the critical area when an aircraft using the ILS is within 4 nautical miles of touchdown. However, the standard also permitted an aircraft to enter a critical area during landing regardless of the position of another aircraft using the ILS. This latter standard was identified as a significant risk because pilots of aircraft using the ILS would be unaware of when an ILS signal disturbance might occur.

To address the latter issue, a new ATC standard has been introduced which requires ATC to specifically warn approaching aircraft if a previously landed aircraft has penetrated a critical area.

The new standard also formalises the existing Australian practice for ILS critical area protection and provides standards for protecting the ILS critical areas and extra "sensitive areas" required for supporting ILS Category II and III operations.

Impact
The impact of the changes to ILS protection area requirements will be low – limited to a period of training for affected ATC personnel. There is no anticipated impact on existing aerodrome movement rates.

C Miscellaneous editorial changes

A number of editorial changes are also made to the MOS to correct some subsection numbering errors in the consolidated MOS document.

Impact
CASA's assessment is that the changes will have no impact on ATC operations.

MOS amendment
Details of the MOS amendment are contained in Attachment 1.

Legislative Instruments Act
Under paragraph 98 (5A) (a) of the Act, the regulations may empower CASA to issue instruments in relation to matters affecting the safe navigation and operation of aircraft. Subregulation 172.022 (1) of CASR 1998 consequentially empowers the making of the MOS and the MOS amendment.

Under subsection 98 (5AA) of the Act, an instrument issued under paragraph 98 (5A) (a) (that is, the MOS amendment) is a legislative instrument for the *Legislative Instruments Act 2003* (the ***LIA***) if it is expressed to apply to a class of persons or aircraft rather than to a singe person or aircraft.

Applying as it does to ATS providers generally, the MOS amendment is, therefore, a legislative instrument subject to registration under section 24 of the LIA, and tabling and disallowance in the Parliament under sections 38 and 42 of the LIA.

Consultation
Consultation under section 17 of the LIA has taken place under the NPRM process described above and in accordance with the requirements for making a MOS under Subpart 11.J of CASR 1998.

As noted, NPRM 0906AS – IFR minima and low visibility operations – was released for public consultation on 12 December 2009. The period for comment closed on 12 February 2010. There were 10 responses to the NPRM and CASA took each response into account in deciding how to proceed further with the NPRM.

Office of Best Practice Regulation (*OBPR*)
CASA assessed the proposed changes for their impact on industry, and concluded that all the changes are expected to have a nil to low impact. CASA also submitted the change proposals for review by the OBPR, and has been informed that no Regulation Impact Statement is required (OBPR Exemption 10996 refers).

Making, commencement and date of effect
The MOS amendment generally commences on the day after it is registered, on which date the minor editorial amendments take effect.

However, the substantive amendments (contained in item 7 of the MOS amendment) do not commence until 2 June 2011. Implementation of these is delayed to allow the procedural changes to be incorporated in the Aeronautical Information Publication (AIP) at the next internationally recognised amendment date, and to give ATS providers lead time to implement the necessary changes.

The instrument has been made by the Director of Aviation Safety, on behalf of CASA, in accordance with subsection 73 (2) of the Act.

[Manual of Standards Part 172 Amendment (No. 1) 2011]

Attachment 1

Manual of Standards Part 172 Amendment (No. 1) 2011

1 Name of instrument

Under this section, the instrument is named the *Manual of Standards Part 172 Amendment Instrument (No. 1) 2011*.

2 Commencement

2.1 Under this section, the instrument commences as follows:

(a) on the day after it is registered — sections 1, 2, 3 and 4, and Schedule 1 (except Amendment No. 7) and Schedule 2;

(b) on 2 June 2011 — Amendment No. 7 in Schedule 1.

3 Amendment of the Manual of Standards Part 172

Under this section, Schedule 1 amends Manual of Standards Part 172 (***MOS Part 172***).

4 Confirmation of numbering of MOS Part 172

This is an avoidance of doubt provision needed because past amendment provisions were consolidated in the MOS with numbers different from those legislated in the amending instruments. The intention is to legitimise the changed numbers.

Thus, under this section each provision in MOS Part 172, contained in the compilation on the Federal Register of Legislative Instruments (***FRLI***) in force immediately before the commencement of this instrument, and whose number is listed in Schedule 2, is expressed to have the number that appears for it in the compilation.

A Note explains that under subsection 22 (2) of the *Legislative Instruments Act 2003*, a compilation relating to a legislative instrument that is registered on FRLI is taken, unless the contrary is proved, to be a complete and accurate record of that legislative instrument as amended and in force at the date specified in the compilation.

On consolidation of certain past amendments into the MOS, the numbers of some provisions in Chapters 10 and 11 were changed without express legislative authority. This amendment removes any doubt that the numbering of the relevant provisions is lawfully as shown in the current compilation of the MOS.

Schedule 1 Amendments

[1] After subsection 1.1.6

This amendment adds a new section heading:

Section 1.2: Abbreviations and Definitions

[2] Paragraph 1.1.7.1

This amendment adds an explanation of the abbreviation PRF, meaning "positive radio fix".

[3] Section 1.1: General, renumbering

This amendment renumbers subsections 1.1.7 and 1.1.7.1 as 1.2.1 and 1.2.1.1, respectively.

[4] Section 1.2 :Definitions, heading

This amendment omits the section heading – "Section 1.2: Definitions".

[5] Subsection 1.2.1: Introduction, heading

This amendment omits the heading – "1.2.1: Introduction" and replaces it with the heading – "1.2.2: Definitions"

[6] Subsection 1.2.2: Definitions

This amendment renumbers subsection 1.2.1.1 as 1.2.2.1.

[7] After subsection 10.3.2

This amendment inserts a **new subsection 10.3.3** – Implementation of low visibility procedures – which provides standards for the weather conditions under which ATC must implement low visibility procedures.

The amendment also includes the requirements for informing flight crew that low visibility procedures are in force.

This amendment also inserts a **new subsection 10.3.4** which provides the standards for protecting ILS critical and sensitive areas.

Under the standards, ATC must not permit vehicles or personnel in an ILS critical area while the ILS is in use.

If the cloud ceiling is 600 ft or more, or the visibility is 2 000 m or more, ATC may permit an aircraft within a critical area.

If the cloud ceiling or visibility is below these values, then ATC may only permit an aircraft to enter a critical area if approaching aircraft have not passed a point approximately 4 nautical miles from the runway.

Aircraft will be permitted to enter a critical area if necessary for a landing operation. However, ATC will then be required to warn other aircraft using the ILS.

The new subsection 10.3.4 also sets standards for protecting ILS critical and sensitive areas – the latter having larger dimensions than the critical area.

Sensitive area protection is required for ILS Category II or III operations, which are high-precision landing operations carried out with a cloud ceiling of less than 200 ft above ground level or visibility of less than 550 m.

Category III operations, in particular, involve automatic landings which require a high degree of accuracy and reliability from the ILS equipment and beam disturbances from vehicles and aircraft cannot be tolerated.

Finally, **the new subsection 10.3.5** sets standards for ATC informing pilots whether or not critical and sensitive areas are being protected.

Amendment No. 7 does not commence until 2 June 2011.

[8] Paragraph 10.8.2.2 (d)

This amendment corrects a typographical error within the paragraph.

[9] Subparagraph 10.8.2.2 (e) (i)

This amendment corrects a grammatical inconsistency within the subparagraph.

Schedule 2 Confirmation of numbering of MOS Part 172

Schedule 2 contains a table listing the 24 provision numbers whose legal correctness is confirmed by operation of section 4 above.