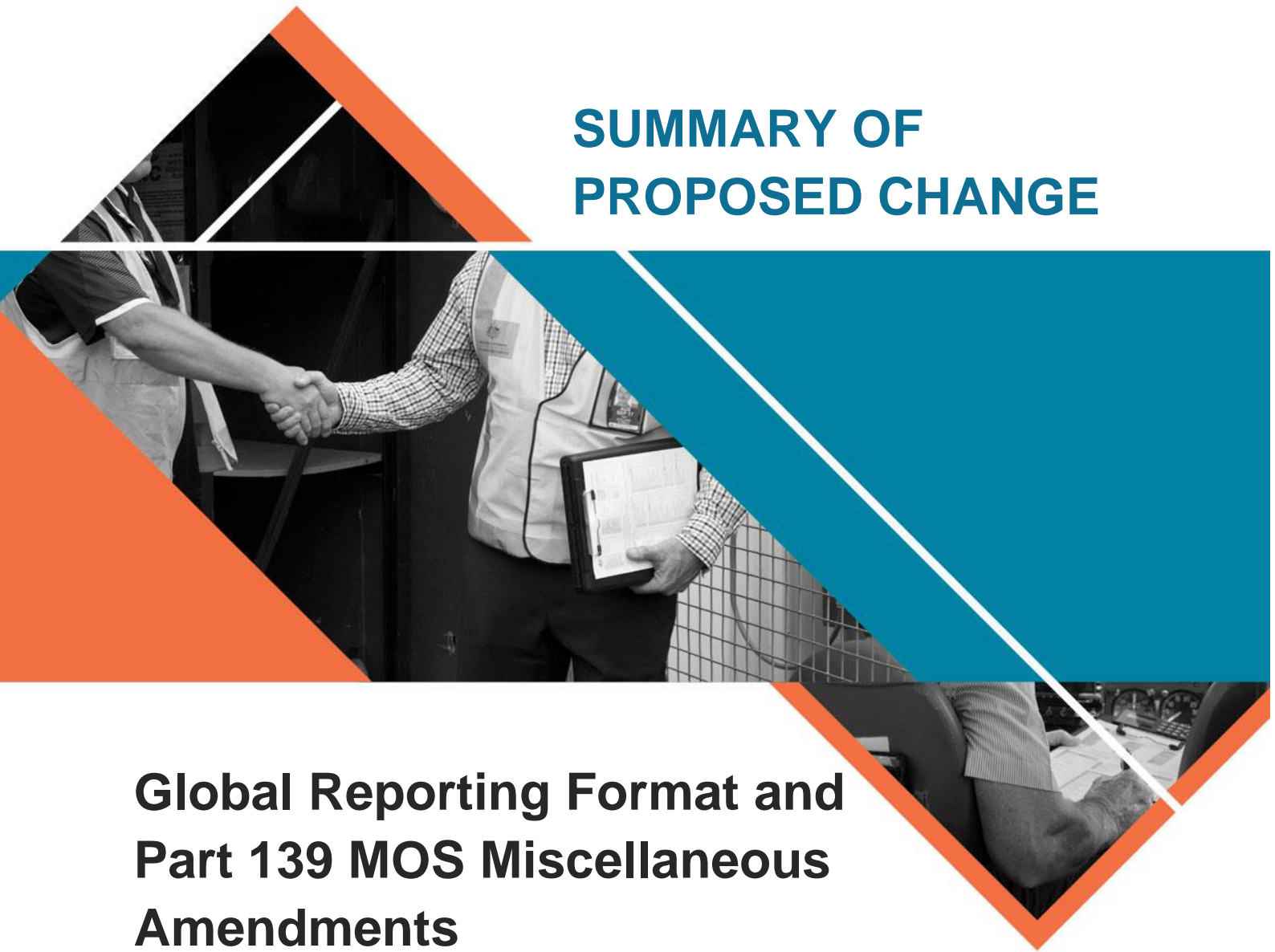




SUMMARY OF PROPOSED CHANGE



Global Reporting Format and Part 139 MOS Miscellaneous Amendments

Part 139 Manual of Standards (Global Reporting Format and Miscellaneous Amendments)
Instrument 2023

Part 91 Manual of Standards (Global Reporting Format) Amendment Instrument 2023 (No. 2)

Date	October 2023
Project number	AS 18/05
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Introduction

Runway safety, particularly runway excursions, remains one of the top aviation safety priorities of the International Civil Aviation Organization (ICAO). The Flight Safety Foundation [echoes these concerns](#) and indicated that the third most common landing excursion risk factor is ineffective braking action, due to runway contamination such as snow, ice, slush or water¹.

To address the issue, the ICAO Friction Task Force developed a new global reporting system for assessing and reporting runway surface conditions, known as the Global Reporting Format (GRF), to enable the harmonised assessment and reporting of runway surface conditions and rapid removal of contamination from the runway surfaces.

The GRF provides timeliness, uniformity and consistency across the assessment and reporting of runway surface conditions. Assessing and reporting the condition of the runway is necessary to provide the flight crew with the information needed for take-off and landing performance. Pilots need to know the condition of the runway surface to assess the impact on braking action when runways have reduced surface friction. The runway condition report (RCR) is used by the aerodrome operator for reporting this assessed information.

Implementation of the GRF impacts on flight operations, aerodrome operations and reporting to pilots through ATC and AIS. Amendments are required to the Part 91 and Part 139 Manual of Standards (MOS). These relate to runway surface condition assessment and reporting by the aerodrome operator or ATC (Part 139 MOS) and use of affected runways by pilots (Part 91 MOS).

Through the National Runway Safety Group (NRSB), the nature and extent of implementation has been discussed with industry for a significant period of time and policy previously published for public consultation in 2022. The policy has been reviewed extensively and can have broader applicability to certified aerodromes thereby providing wider safety benefits to the pilot community.

These rule changes reflect consideration of economic and operational impacts on all stakeholders with a particular focus on providing pilots and aircraft operators with the right information, at the right time, to know the condition of a runway surface and ensure safe operations during take-off and landing.

Additionally, it is necessary to update the Part 139 MOS in relation to the following:

- amend all references to Section 1.06 to Section 1.07 - References to ICAO and other documents
- include a definition for *runway starter extension*
- update the distance of a pre-threshold area marking (chevron) from the runway edge to a maximum of 7.5 m
- allow CASA to approve a temporary Visual Approach Slope Indicator System (VASIS) from the requirement for a flight check instead of requiring CASA to provide an exemption
- include provisions for aerodrome personnel to read back ATC clearances and instructions at controlled aerodromes.

¹ This trend was also confirmed by the main aircraft manufacturers.

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Attachments:

**Part 91 Manual of Standards (Global Reporting Format) Amendment Instrument 2023
(No.2)**

**Part 139 Manual of Standards (Global Reporting Format and Miscellaneous
Amendments) Instrument 2023**

**Draft Multi-Part AC 91-32 and AC 139-22 - Version 1.0 - Global reporting format –
Runway surface condition**

Reference material

Acronyms

The acronyms and abbreviations used in this SPC are listed in the table below.

Acronym	Description
AC	advisory circular
AFM	Aircraft flight manual
AIREP SPECIAL	Special air-report
AIS	Aeronautical Information Service
ATC	Air traffic control
ATIS	Automatic terminal information service
CA/GRS	Certified air/ground radio service
CAR	<i>Civil Aviation Regulations 1988</i>
CASA	Civil Aviation Safety Authority
CASR	<i>Civil Aviation Safety Regulations 1998</i>
FMS	Flight Management System
GRF	Global Reporting Format
ICAO	International Civil Aviation Organization
NOTAM	Notice to Airmen
NRSRG	National Runway Safety Group
PIC	Pilot in command
RCAM	Runway condition assessment matrix
RCR	Runway condition report
RWYCC	Runway condition code
UNICOM	Universal communications
VASIS	Visual Approach Slope Indicator System

Definitions

Terms that have specific meaning within this SPC are defined in the table below. Where definitions from the civil aviation legislation have been reproduced for ease of reference, these are identified by 'grey shading'. Should there be a discrepancy between a definition given in this SPC and the civil aviation legislation, the definition in the legislation prevails.

Term	Definition
Aeronautical information service (AIS)	A service established within the defined area of coverage responsible for the provision of aeronautical data and aeronautical information necessary for the

Term	Definition
	safety, regularity and efficiency of air navigation.
Air traffic control (ATC)	Air Traffic Services in its capacity as a provider of air traffic control services.
Air traffic service (ATS)	A generic term meaning variously, flight information service, alerting service, air traffic advisory service, air traffic control (ATC) services such as area control service, approach control service or aerodrome control service.
Automatic terminal information service (ATIS)	The provision of current, routine information to arriving and departing aircraft by means of continuous and repetitive broadcasts during the hours when the unit responsible for the [air traffic] service is in operation.
CA/GRS	An aerodrome radio information service that provides aircraft operating in the vicinity of an aerodrome with the services and information specified in Chapter 22 of the Part 139 Manual of Standards (MOS).
Contaminant	Matter present on the surface of a runway including, compacted snow, dry snow, frost, ice, slush, standing water, wet ice or wet snow.
Contaminated runway	A runway is contaminated if more than 25% of the surface area required for a take-off or landing is covered by any of the following: (a) water or slush more than 3 mm deep; (b) loose snow more than 20 mm deep; (c) compacted snow or ice.
Dry runway	A runway is dry if the surface area required for a take-off or landing: (a) has no visible moisture; and (b) is not contaminated.
NOTAM	A notice issued by the NOTAM Office containing information or instructions concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to persons concerned with flight operations
Reduced braking action	Based on pilot observations that braking deceleration and directional control is worse than expected.
Runway	A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft.
Runway condition assessment matrix (RCAM)	A matrix for assessing the runway condition code from a set of observed runway surface conditions and the pilot in command's report on braking action.
Runway condition code (RWYCC)	The number used in a runway condition report to describe the runway surface condition.
Runway condition report (RCR)	A comprehensive standardised report relating to runway surface conditions, and their effect on aeroplane landing and take-off performance.
Runway surface condition descriptors	See definition of 'contaminant' above.
Slippery wet runway	A wet runway where the surface friction characteristics of a significant portion of the runway show that the runway is degraded.
SNOWTAM	A special series NOTAM given in a standard format providing a surface condition report notifying the presence or cessation of hazardous conditions due to snow, ice, slush, frost, standing water or water associated with snow, slush, ice or frost on the movement area.
Special Air-Report	An AIREP containing the report of special meteorological conditions, i.e.

Term	Definition
(AIREP Special)	SIGMET phenomenon, or any other MET phenomenon which is likely to affect the safety or efficiency of other aircraft.
Wet runway	A runway is wet if the surface area required for a take-off or landing: (a) is not dry; and (b) is not contaminated.
UNICOM	A non-air traffic control communication facility operated to provide an advisory service to enhance the value of information normally available at a non-controlled aerodrome.

References

Legislation

Legislation is available on the Federal Register of Legislation website <https://www.legislation.gov.au/>

Document	Title
Volume 5 of CASR	Dictionary
Part 121 of CASR	Australian air transport operations—larger aeroplanes
Part 135 of CASR	Australian air transport operations— smaller aeroplanes
Part 172 of CASR	Air Traffic Service Providers
Part 175 of CASR	Aeronautical information management
Part 91 Manual of Standards	Part 91 (General Operating and Flight Rules) Manual of Standards 2020
Part 139 Manual of Standards	Part 139 (Aerodromes) Manual of Standards Amendment Instrument 2020 (No. 1)

International Civil Aviation Organization documents

International Civil Aviation Organization (ICAO) documents are available for purchase from <http://store1.icao.int/>

Document	Title
Annex 3	Meteorological Service for International Air Navigation
Annex 6 Part I	International Commercial Air Transport — Aeroplanes
Annex 8	Airworthiness of Aircraft
Annex 14 Volume I	Aerodrome Design and Operations
Annex 15	Aeronautical Information Services
Doc 9981	PANS-Aerodromes
Doc 10066	PANS-Aeronautical Information Management
Doc 4444	PANS-Air Traffic Management
Doc 10064	Aeroplane Performance Manual

Document	Title
Doc 9137	Airport Services Manual Part 2 — Pavement Surface Conditions Part 8 — Airport Operational Services Part 9 — Airport Maintenance Practices
Circular 355	Assessment, Measurement and Reporting of Runway Surface Conditions

Advisory material

CASA's advisory materials are available at <https://www.casa.gov.au/publications-and-resources/guidance-materials>

Document	Title
AC 91-02	Guidelines for aeroplanes with MTOW not exceeding 5 700 kg - suitable places to take off and land
AC 139-22 v1.0 (draft)	Global reporting format – Runway surface condition
AC 139.C-03	Serviceability Inspections
AC 139.C-06	Skid resistance of aerodrome pavements

Purpose and scope of the proposed amendments

This section outlines the specific key change proposals in Part 91 MOS and Part 139 MOS to implement the GRF and additional miscellaneous amendments. Comments from the first public consultation that ended in November 2022 have been considered along with feedback from the NRSO GRF implementation working group and internal CASA review in relation to the GRF change proposals.

Key change proposals - Global Reporting Format - Part 91 MOS

21.05 - Controlled aerodromes and controlled airspace — prescribed reports

Key change 1

Add a requirement that the pilot in command (PIC) of an aircraft must report to ATC after landing if the braking action experienced was not as good as that reported for the runway.

The report is to be made through an AIREP Special. The requirements for providing AIREP Specials are already detailed in the AIP ENR 1.1. Appendix 1 and Section 3, Item 9 of the AIREP Special contains a report for 'Runway braking action'.

24.02 - Take-off performance for aeroplanes

Key change 1

Add a requirement that the PIC of an aeroplane must, if available, take into account the runway surface and runway surface condition when determining take-off performance. Take-off performance already needs to be determined in accordance with the Aircraft Flight Manual (AFM), aircraft manufacturer's manual or Part 121 approved data.

Runway surface and runway surface condition may impact on take-off distance. Not all Part 91 operations will be to certified aerodromes therefore it only needs to be taken into account if a Runway Condition Report (RCR) is available.

25.02 - Landing performance for aeroplanes

Key change 1

Add a requirement that the PIC of an aeroplane must, if available, take into account the runway surface and runway surface condition when determining landing performance.

Landing performance already needs to be determined in accordance with the Aircraft Flight Manual (AFM), aircraft manufacturer's manual or Part 121 approved data. Runway surface and runway surface condition may impact on landing distance. Not all Part 91 operations will be to certified aerodromes therefore it only needs to be taken into account if an RCR is available.

Key change proposals - Global Reporting Format - Part 139 MOS

Transitional arrangements

Key change 1

Add a requirement that controlled aerodromes or certified aerodromes with scheduled Part 121 aircraft operations have up to 6 months to transition to the GRF.

Key change 2

Add a requirement that the remaining certified aerodromes have up to 12 months to transition to the GRF.

3.01 - Definitions

Key change 1

Add GRF definitions for contaminant, runway condition assessment matrix (RCAM), runway condition code (RWYCC), runway condition report (RCR), runway surface condition descriptors and slippery wet runway.

11.03 - Aerodrome serviceability inspections

Key change 1

Add a requirement that the aerodrome manual must contain the procedures for carrying out aerodrome serviceability inspections in relation to assessing changes to the RWYCC and runway surface contaminant types.

11.05 - Aerodrome reporting

Key change 1

Add a requirement that the aerodrome manual must contain the procedures for assessing and reporting RWYCC and runway surface description to ATC, NOTAM Office and pilots.

12.01 - General

Key change 1

An aerodrome serviceability inspection is already required following a severe wind event, a severe storm or a period of heavy rainfall. Amend the requirement so that inspections are only required when there are known aircraft operations (scheduled, anticipated or ongoing).

Add a requirement for an inspection after prolonged rainfall. These weather events are most likely to result in a wet, slippery wet or contaminated runway.

Add a note that if pooling or ponding of water, or poor drainage, occurs on a runway, the aerodrome operator needs to refer to Chapter 18 for the maintenance requirements.

Add a note that the inspections are not required to be conducted if the weather conditions such as lightning in the area, could cause a WHS hazard to aerodrome personnel.

Key change 2

Add a requirement that an aerodrome serviceability inspection is required when aircraft operations are scheduled, anticipated or ongoing, following weather conditions which might cause the RWYCC to change or a runway surface contaminant to appear or change type.

Key change 3

Add a requirement for an additional daily aerodrome serviceability inspection for aerodromes with Code 3 or 4 runways at aerodromes with scheduled international air transport operations. They only need to be conducted if aircraft operations are spaced out by at least 6 hours to avoid, for example, requiring 2 inspections if there are only a few services operating daily, but are close together.

Any inspections carried out for one of the inspection requirements in the MOS can count as an inspection for another requirement.

12.05 - Global reporting format and aerodrome serviceability inspection requirements - new section

Key change 1

The applicability of this section on GRF is for all certified aerodromes, but only those with a sealed runway and does not include gravel or grass etc. The inspection, assessment and reporting requirements are only for an operational runway i.e., a runway in use at the time of the weather event or after effects of the weather e.g. standing water on the runway.

Key change 2

Add a requirement that any aerodrome serviceability inspection carried out under Chapter 12 must also check for the presence of visible dampness, standing water, snow, slush, ice, or frost on an operational runway.

Visible dampness meets the definition of a 'wet' runway. The check is only for an operational runway—active or in use when the runway surface condition exists—and not for the entire movement area.

Key change 3

Add a requirement that an aerodrome operator must determine the applicable RWYCC based on the associated runway surface description e.g., a WET runway is assigned a RWYCC of 5.

The table provided for this RWYCC assignment is only for runways that are dry, wet, slippery wet or have standing water which are the prevalent conditions in Australia. This is supported by ICAO in Circular 355 which has a Runway Condition Assessment Matrix (RCAM) for WET and DRY runways only. Other contaminated runways with SNOW or FROST are treated separately

as they are relatively rare conditions that apply to an extremely small number of certified aerodromes (e.g. Mount Hotham).

Key change 4

Add a requirement that the aerodrome operator must make wet or standing water runway condition reports (RCRs).

WET runways are only to be reported to ATC, if present, and if not and if possible, directly to pilots. Some control towers are not open 24/7 and most certified aerodromes don't have ATC present. It may be possible for an aerodrome operator to report directly to pilots via UNICOM, CA/GRS or direct communications with the aircraft operator. For example, mining companies that own the aerodrome or aerodrome reporting officers with VHF radios.

Where there is an agreement at a controlled aerodrome between the aerodrome operator and ATC, for ATC to assess and report a runway or thirds of a runway as being WET, then the aerodrome operator does not need to make the report to ATC. ATCs are trained to assess runways as being WET or DRY in relation to Part 172 MOS requirements for selecting the runway in use.

Runways that are SLIPPERY WET or have STANDING WATER are to be reported to ATC, if present, and the NOTAM Office, and to pilots, if ATC is not present and if possible.

The report must be made as soon as possible, but only if aeroplane operations are scheduled, anticipated or ongoing (i.e., no need to make reports if there are no aeroplanes using the runway).

The format of the RCR is the runway number followed by the RWYCC for each third of the runway followed by the runway surface description for each third of the runway. ICAO PANS-Aerodromes states that if 25% or less of a runway third is wet or covered by a contaminant, a RWYCC 6 shall be reported which is the same as for a DRY runway. We propose that if 25% or less of a runway third has STANDING WATER on it then it is to be reported as RWYCC 5 with a runway surface description of WET to indicate to pilots that the runway isn't dry, but isn't contaminated, either. Also, if the depth of water is reasonably ascertainable, that is to be reported as well i.e. it is not expected that an aerodrome operator measures depth of water during or following a storm while a runway is actively being used by aeroplanes. However, following rain events which cause pooling or ponding of water, when the runway is not in use, an aerodrome operator may be able to measure the water depth, record it and be able to report it when the runway is in use during that runway surface condition.

The ICAO RCR format doesn't use the prefix 'RWY' in front of the runway number, however there are human factors issues associated with pilots reading a string of numbers in a NOTAM and not associating it with a runway. 'RWY' should precede the runway number. This will also facilitate searching in automated NOTAM processing systems for the keyword 'RWY' to quickly locate the most critical NOTAMs.

ICAO requires percentage and depth of each contaminant to be reported for each runway third for all instances of contamination of more than 25% of a runway third. This adds a level of complexity and subjectivity for assessment without specialised measuring equipment, which is not being mandated due to cost of implementation. Also, this would introduce undesirable safety risks requiring aerodrome personnel to enter an active runway to make the measurements. These conditions are also very rare in Australia. Therefore, these percentage and depth reporting elements are not being implemented in Australia.

Key change 5

Add a requirement that the aerodrome operator must make 'SLIPPERY WET' runway surface friction reports to ATC, if present, and the NOTAM Office, and to pilots, if ATC is not present and if possible.

The report must be made as soon as possible, but only if aeroplane operations are scheduled, anticipated or ongoing (i.e., no need to make reports if there are no aeroplanes using the runway).

The runway is considered 'slippery wet' if the aerodrome operator has assessed it as such due to previous experience when it is wet, or the aerodrome operator receives at least two reports from pilots for a wet runway of a MEDIUM braking action, or at least two reports from ATC for a wet runway of pilots reporting a braking action of MEDIUM. Wet runways are normally associated with a braking action of GOOD.

The format of the RCR is the runway number followed by the RWYCC for each third of the runway followed by the 'SLIPPERY WET' runway surface description for each third of the runway. ICAO requires 'slippery wet' runways to be reported as 'WET' with an RWYCC of 3 instead of 5.

There are human factors issues involved with pilots reading a NOTAM with 'WET/WET/WET' and not realising the hazard associated with reduced surface friction associated with part of the runway being slippery wet. Therefore, we are requiring the runway surface description 'SLIPPERY WET' to be used.

Additionally, due to the particular hazards associated with reduced runway surface friction for slippery wet runway surface conditions, the percentage of a runway third is to be reported as well. Guidance will be provided that the percentage increments are in multiples of 25. For example, 25%, 50%, 75%, 100%.

Key change 6

Add a requirement that the aerodrome operator must make RCRs for the remaining contaminated runway surface conditions. For example, frost and snow. The reports are to be made to ATC, if present, and the NOTAM Office, and to pilots, if ATC is not present and if possible.

The report must be made as soon as possible, but only if aeroplane operations are scheduled, anticipated or ongoing (i.e., no need to make reports if there are no aeroplanes using the runway).

The format of the RCR is the runway number followed by the RWYCC for each third of the runway followed by the runway surface description for each third of the runway. ICAO PANS-Aerodromes states that if 25% or less of a runway third is covered by a contaminant, a RWYCC 6 shall be reported which is the same as for a DRY runway. We propose that if 25% or less of a runway third has a contaminant on it then it is to be reported as RWYCC 5 with a runway surface description of WET to indicate to pilots that the runway isn't dry, but isn't contaminated, either. Also, if the depth of the contaminant is reasonably ascertainable, that is to be reported as well.

13.03 - Reporting officer

Key change 1

Add additional requirements that the aerodrome operator must ensure that aerodrome reporting officers are suitably trained to carry out aerodrome serviceability inspections and reports for runway surface conditions.

18.02 - Runway surface friction or texture

Key change 1

Update the Note reference to ICAO accepted continuous friction measuring techniques in ICAO Circular 355 instead of Airport Services Manual, Part 2 (Document 9137), Pavement Surface Conditions.

Key change 2

Add a requirement that the aerodrome operator must ensure that any person using a continuous friction measuring device is competent to use that device. Competence can be demonstrated through specific training or experience.

18.03 - Water pooling or ponding

Key change 1

Add a requirement that the aerodrome operator must undertake remedial maintenance action to repair a runway, after pooling, ponding, or poor drainage of water is detected, during a runway serviceability inspection following a severe wind event, a severe storm, or a period of heavy or prolonged rainfall.

It is not expected that runways or parts of runway surfaces need to be overlaid, re-surfaced or replaced, but maintenance action should be taken to address the formation of depressions or surface irregularities that allow water to pool, pond, or not drain.

Key change proposals - Part 139 MOS Miscellaneous Amendments

3.01 - Definitions

Key change 1

Add a definition for 'runway starter extension' to reflect that it is an additional length of pavement available for take-off but not for landing.

Key change 2

Amend all references to Section 1.06 to Section 1.07 - References to ICAO and other documents.

8.16 - Pre-threshold area markings

Key change 1

Amend the requirement for the pre-threshold area chevron marking to be a 'maximum' of 7.5 m from the runway edge instead of a 'minimum'. The wording is currently opposite to the Annex 14 Volume I requirement which allows the chevron marking to abut the runway edge for 30 m wide runways.

9.18 - Commissioning of lighting systems — flight checks

Key change 1

Replace the requirement for CASA to exempt a temporary VASIS from the requirement for a flight check with the requirement for a CASA approval. This would still be subject to a safety assessment. The exemption process is unnecessarily burdensome for the requirements of the existing safety assessment.

Chapter 11 - Information that must be included in the aerodrome manual - Airside vehicle control

Key change 1

Add a requirement that procedures need to be included in the aerodrome manual for airside drivers to read back to ATC safety-related parts of any ATC clearances or instructions. Aerodrome manuals already contains procedure for aerodrome personnel to interact with ATC clearances and instructions.

14.03 - Airside vehicle requirements

Key change 1

Add a requirement that two-way VHF radios are required at controlled aerodromes to communicate with ATC, when ATC is in operation. The current equipment requirement is only for receivers and not transmitters thereby not requiring a capability to transmit a read back to ATC. Airside vehicles have always had to be in two-way communications with ATC when operating on the manoeuvring area therefore, this formalises the requirement.

14.06 - Surface vehicle control and communications

Key change 1

Add a requirement that airside drivers, when operating on the manoeuvring area, must comply with ATC clearances and instructions, read back safety-related parts of any ATC clearance or instruction and must always read back:

- a. any route specified in a clearance or instruction
- b. any clearances or instructions to, operate on, enter, stop on, wait on, hold short of, cross, or vacate, any runway or taxiway
- c. any radio frequency instructions.

This provides for the specific circumstances when aerodrome personnel are required to provide read backs to ATC.

Previous consultations

The nature and extent of implementation has been discussed with industry, through the NRSG. A specific GRF implementation working group was created to assist with policy development. The group membership involved in the development of this policy proposal consisted of air transport aircraft operators, aerodrome operators, pilot and airport associations, aerodrome consultants, Airservices Australia, Department of Defence and CASA.

Public consultation took place in late 2022 through [PP 2211AS](#). The original policy was limited to controlled aerodromes (23) with scheduled air transport operations and an opt-in arrangement for other certified aerodromes with scheduled air transport operations. For those aerodromes that opted-in they were required to establish a UNICOM service.

Feedback on the consultation did raise some concerns with resource implications for non-controlled certified aerodromes and at controlled aerodromes outside of tower hours. Additionally, this policy would have seen GRF implemented at relatively few of the over 330 certified aerodromes in Australia.

In mid-2023 the policy was reviewed and sought to extend the applicability of runway surface condition reporting as wet, slippery wet and contaminated runways could impact take-off and landing performance for most aeroplanes operating in accordance with an aircraft flight manual (AFM). The hazards associated with reduced runway surface friction also impacted on most pilots.

The NRSG GRF implementation working group met a further 3 times in August and September 2023 to settle the final policy for all certified aerodromes. The working group endorses the policy being presented in this consultation.

Impact on industry

Runways have become wet or contaminated ever since they were first constructed, and pilots have had to be trained and prepared to operate on those same wet or contaminated runways. The AFM will contain take-off and landing performance calculations which generally increase the take-off or landing distance required when a runway is wet or contaminated. Slippery wet runways introduce their own hazards with reduced runway surface friction with a corresponding impact on braking action. The GRF provides a standardised method of assessing and reporting runway surface conditions. However, aerodrome operators should always have been reporting unsafe or hazardous runway surface conditions to pilots.

Currently, all certified aerodromes are required to conduct an aerodrome serviceability inspection after a severe storm or a period of heavy rainfall and are required to request a NOTAM to be issued for events which affect the safety of aircraft. The RCR provides a format for reporting runway condition code and runway surface description. Therefore, CASA does not expect this aspect of the changes to bring significant costs to an aerodrome operator for the reporting aspects. The format is quite simple, and CASA provides guidance in an accompanying *Draft Multi-Part AC 91-32 and AC 139-22 - Version 1.0 - Global reporting format – Runway surface condition* along with a training syllabus for aerodrome operators. The AC also provides a link to online GRF training courses provided by ICAO in partnership with Airports Council International (ACI).

The costs associated with the change proposals relate to inspection and assessment of runway surface conditions. CASA is not requiring aerodrome operators to invest in expensive sophisticated equipment that is able to assess a runway for the presence or depth of water or other contaminants. ICAO recognises visual assessment as appropriate to assess runway surface conditions. It should be noted that there will not be a significant number of occasions when runways have standing water on them due to the Part 139 MOS design requirement for transverse slopes that don't allow pooling or ponding of water. However, runways are subject to significant wear and tear, particularly at a busy aerodrome.

Runway maintenance should take place to repair depressions if possible. If repairs are not possible without replacing the entire, or large parts of, the runway surface then experience should indicate to the aerodrome operator if standing water is likely to develop following periods of heavy rain. Measurements can be taken when the runway isn't active and recorded so they can be reported to pilots when the runway is in use. Additionally, if 25% or less of a third of a runway has standing water or is otherwise contaminated, ICAO treats this as a DRY runway, even if the contamination is concentrated in the most operationally significant areas.

Our proposal is that if 25% or less than a third of a runway is contaminated it is assigned a RWYCC of 5 and a surface description of WET to indicate that it is not contaminated but isn't dry either. Only reporting over 25% of a third of a runway as contaminated also means there are even less likely circumstances when standing water will need to be reported.

Perhaps the biggest expense associated with implementation is requiring aerodrome operators to assess a runway as being wet and reporting this to ATC. This is not complex when it is raining but after showers have passed and the runway starts to dry it is problematic for aerodrome personnel to continually assess the entire length and width of a runway and report it as it dries. This aspect is also recognised by ICAO. If there is an agreement between the aerodrome operator and ATC (Airservices Australia), ATC can make the assessment and reporting for wet and dry runways. ATCs are trained to do this for selecting the runway in use under the

Part 172 MOS. Additionally, ATCs have the best vantage point from the ATC tower cabin or VSS to have an overall view of a runway as it dries.

ICAO, in Annex 14 Volume I, doesn't consider that wet runway surface condition reporting doesn't involve ATC as the Annex is intended for international air transport operations. However, Australia, along with many other countries, will have many certified aerodromes where commercial passenger numbers do not create a sufficient risk requiring the establishment of ATC services. For those certified aerodromes without ATC, or controlled aerodromes when ATC is not present because ATC services are not always provided 24 hours a day, 7 days a week, we only require aerodrome operators to report wet runways to pilots if it is possible. It should also be remembered that ATC do not report RCRs individually to pilots rather they are recorded on the Aerodrome Terminal Information Service (ATIS). This capability doesn't exist for non-controlled aerodromes.

Safety risk analysis

CASA conducted a safety risk analysis during development of the proposed amendment. The risk being managed is the possibility of a runway excursion because a pilot is unaware of reduced runway surface friction due to a runway being wet, contaminated with rubber or other deposits and wet (slippery wet), or otherwise contaminated with standing water or snow as an example.

The amendments are expected to enhance safety by addressing the risk above by introducing a timely, consistent and standardised method of inspecting, assessing and reporting the surface condition of a runway.

In order to provide sufficient time for aerodrome operators to train aerodrome personnel to assess and report runway surface conditions, and for pilots to understand the new reporting format a staged transition and implementation is proposed.

A 6-month transition period is being provided for the larger aerodromes with ATC services or non-controlled aerodromes with scheduled Part 121 air transport operations. For the other certified aerodromes with less aerodrome traffic and aerodrome resources available, a 12-month transition period is being provided. In both cases the transition period will allow earlier implementation if an aerodrome operator is ready to adopt the new runway surface condition reporting format.

Impact analysis

CASA has prepared a Preliminary Assessment for the proposed changes that outlines the impact of the proposed amendments. CASA will submit the Preliminary Assessment to the Office of Impact Analysis for their assessment and will prepare an Impact Analysis document if required.

Closing date for comment

CASA will consider all comments received as part of this consultation process and incorporate changes as appropriate. Comments on the draft amendment instruments and the draft Multi-Part AC should be submitted through the online response form by close of business 27 November 2023.