



ICAO

Doc 9981

PROCEDURES FOR AIR NAVIGATION SERVICES

Aerodromes

Second Edition, 2016



This edition supersedes, on 10 November 2016, all previous editions of Doc 9981.

INTERNATIONAL CIVIL AVIATION ORGANIZATION

This is a preview. [Click here to purchase the full publication.](#)



| ICAO

Doc 9981

PROCEDURES FOR AIR NAVIGATION SERVICES

Aerodromes

Second Edition, 2016

This edition supersedes, on 10 November 2016, all previous editions of Doc 9981.

INTERNATIONAL CIVIL AVIATION ORGANIZATION

[This is a preview. Click here to purchase the full publication.](#)

Published in separate English, Arabic, Chinese, French, Russian
and Spanish editions by the
INTERNATIONAL CIVIL AVIATION ORGANIZATION
999 Robert-Bourassa Boulevard, Montréal, Quebec, Canada H3C 5H7

For ordering information and for a complete listing of sales agents
and booksellers, please go to the ICAO website at www.icao.int

First edition 2015
Second edition 2016

Doc 9981, *Procedures for Air Navigation Services — Aerodromes*

Order Number: 9981

ISBN 978-92-9258-123-7

© ICAO 2016

All rights reserved. No part of this publication may be reproduced, stored in a
retrieval system or transmitted in any form or by any means, without prior
permission in writing from the International Civil Aviation Organization.

AMENDMENTS

Amendments are announced in the supplements to the *Products and Services Catalogue*; the Catalogue and its supplements are available on the ICAO website at www.icao.int. The space below is provided to keep a record of such amendments.

RECORD OF AMENDMENTS AND CORRIGENDA

[illegible][illegible]

TABLE OF CONTENTS

	<i>Page</i>
Foreword	(vii)
Acronyms	(xiii)

PART I — AERODROME CERTIFICATION, SAFETY ASSESSMENTS AND AERODROME COMPATIBILITY

Chapter 1. Definitions.....	I-1-1
Chapter 2. Certification of Aerodromes	I-2-1
2.1 General	I-2-1
2.2 Aerodrome manual	I-2-3
2.3 Initial certification	I-2-5
2.4 Aerodrome safety coordination	I-2-9
2.5 Continued aerodrome safety oversight	I-2-13
Appendix 1 to Chapter 2 — Technical inspections and on-site verifications.....	I-2-App 1-1
Appendix 2 to Chapter 2 — Critical data related to safety occurrences reported at aerodromes for the monitoring of safety.....	I-2-App 2-1
Attachment A to Chapter 2 — List of possible subjects covered in an aerodrome manual	I-2-Att A-1
Attachment B to Chapter 2 — Initial certification process.....	I-2-Att B-1
Attachment C to Chapter 2 — Checklist of the components of an aerodrome manual.....	I-2-Att C-1
Chapter 3. Safety assessments for aerodromes.....	I-3-1
3.1 Introduction	I-3-1
3.2 Scope and applicability	I-3-1
3.3 Basic considerations	I-3-2
3.4 Safety assessment process	I-3-3
3.5 Approval or acceptance of a safety assessment	I-3-6
3.6 Promulgation of safety information.....	I-3-7
Attachment A to Chapter 3 — Safety assessment flow chart.....	I-3-Att A-1
Attachment B to Chapter 3 — Safety assessment methodologies for aerodromes.....	I-3-Att B-1

Chapter 4. Aerodrome compatibility	I-4-1
4.1 Introduction	I-4-1
4.2 Impact of aeroplane characteristics on the aerodrome infrastructure	I-4-2
4.3 Physical characteristics of aerodromes	I-4-3
Appendix to Chapter 4 — Physical characteristics of aerodromes	I-4-App-1
Attachment A to Chapter 4 — Aeroplane physical characteristics.....	I-4-Att A-1
Attachment B to Chapter 4 — Aeroplane ground servicing requirements	I-4-Att B-1
Attachment C to Chapter 4 — List of references.....	I-4-Att C-1
Attachment D to Chapter 4 — Selected aeroplane characteristics.....	I-4-Att D-1

PART II — AERODROME OPERATIONAL MANAGEMENT

Chapter 1. Reporting format using standard runway condition report (applicable on 5/11/20)	II-1-1
1.1 Runway surface condition assessment and reporting	II-1-1
1.2 Aerodrome movement area maintenance	II-1-12
Attachment A to Chapter 1 — Methods of assessing runway surface condition (applicable on 5/11/20).....	II-1-Att A-1

FOREWORD

1. HISTORICAL BACKGROUND

1.1 The first edition of the *Procedures for Air Navigation Services — Aerodromes* (PANS-Aerodromes) was prepared by the PANS-Aerodromes Study Group (PASG) and contains material that provides for the suitable and harmonized application of aerodrome Standards and Recommended Practices (SARPs) and operational procedures found in Annex 14 — *Aerodromes*, Volume I — *Aerodrome Design and Operations*.

1.2 The Air Navigation Commission, during its final review of Amendment 10 to Annex 14, Volume I, in June 2008, expressed the view that Annex 14, Volume I, was primarily a design document, and the SARPs therein were appropriate for designing new aerodromes. At existing aerodromes where full compliance with Standards cannot be achieved, alternative measures may be required in order to accommodate a specific type of aeroplane. It was suggested that a PANS-Aerodromes was needed which would include procedures on how to address such operational issues.

1.3 The Air Navigation Commission, during the seventh meeting of its 180th session on 26 February 2009, agreed to develop PANS-Aerodromes to complement Annex 14, Volume I.

2. SCOPE AND PURPOSE

2.1 Annex 14 contains specifications applicable to aerodromes, as well as certain facilities and technical services normally provided at them. To a great extent, the specifications for individual facilities have been interrelated by a reference code system as described in Annex 14, Volume I, in accordance with the characteristics of the aeroplane for which an aerodrome is intended. It is not intended that those specifications limit or regulate the operation of an aircraft. Those matters related to the possible use of the aerodrome by more demanding aircraft and related applicable approvals are left to appropriate authorities to evaluate and take into account for appropriate measures to be implemented as necessary for each particular aerodrome in order to maintain an acceptable level of safety during operations.

2.2 The PANS-Aerodromes are complementary to the SARPs contained in Annex 14, Volume I.

2.3 The PANS-Aerodromes specify, in greater detail than the SARPs, operational procedures to be applied by aerodrome operators to ensure aerodrome operational safety. PANS-Aerodromes specify procedures to be applied by both aerodrome regulators and operators for initial aerodrome certification and continuing aerodrome safety oversight as well as aerodrome compatibility studies, in particular, where full compliance with the SARPs in Annex 14, Volume I, cannot be achieved.

2.4 The PANS-Aerodromes do not substitute nor circumvent the provisions contained in Annex 14, Volume I. It is expected that infrastructure on an existing aerodrome or a new aerodrome will fully comply with the requirements in Annex 14, Volume I. The contents of PANS-Aerodromes are designed to enable the use of the procedures and methodologies described in the document to assess the operational issues faced by existing aerodromes in a changing and challenging environment and to address those issues to ensure the continued safety of aerodrome operations.

2.5 The PANS-Aerodromes focus on the priority areas identified by the ICAO Universal Safety Oversight Audit Programme in the domains of certification of aerodromes, safety assessment and operational procedures at existing aerodromes (aerodrome compatibility). Future editions will include topics that are relevant to the provision of uniform and harmonized procedures in aerodrome operations. This edition also deals with the operational requirements of fixed-wing aircraft and therefore the term “aeroplane” is deliberately used throughout the document to indicate it does not include operational requirements for helicopters.

2.6 The procedures in this document are directed mainly towards aerodrome operators and consequently do not include procedures for aerodrome control service provided by the air traffic service (ATS), which are already covered in the *Procedures for Air Navigation Services — Air Traffic Management* (PANS-ATM, Doc 4444).

3. STATUS

3.1 The PANS do not have the same status as SARPs. While SARPs are *adopted* by the Council in pursuance of Article 37 of the Convention on International Civil Aviation and are subject to the full procedure of Article 90, the PANS are *approved* by the Council and recommended to Contracting States for worldwide application.

3.2 While the PANS may contain material that may eventually become SARPs when it has reached the maturity and stability necessary for adoption as such, they may also comprise material prepared as an amplification of the basic principles in the corresponding SARPs and designed particularly to assist the user in the application of those SARPs.

3.3 Appendices are comprised of material grouped separately for convenience but form part of the *Procedures* approved by the Air Navigation Commission.

3.4 Attachments are comprised of material supplementary to the *Procedures* or included as a guide to their application.

4. IMPLEMENTATION

The implementation of procedures is the responsibility of Member States; they are applicable to actual operations only in so far as States have enforced them. However, with a view to facilitating their processing towards implementation by States, they have been prepared in a language that will permit direct use by aerodrome and State personnel to certify, oversee and manage the operational activities of aerodromes.

5. PUBLICATION OF DIFFERENCES

The PANS do not carry the status afforded to SARPs adopted by the Council as Annexes to the Convention and therefore do not fall under the obligation imposed by Article 38 of the Convention to notify differences in the event of non-implementation. However, attention of States is drawn to the provision in Annex 15 — *Aeronautical Information Services*, related to the publication in their aeronautical information publication (AIP) of lists of significant differences between their procedures and the related ICAO procedures.