ICAO Aerodrome´s Manual

AERODROME´S INSPECTOR WORKSHOP
St. Maarten, MAHO 11–15 June 2012
Objectives

– Identify the requirements listed in Annex 14 regarding the development and maintenance of an aerodrome manual.
– Identify and discuss the purpose/s of an Aerodrome Manual
– Identify the general and specific content requirements of an aerodrome manual.
– Discuss development and amendment requirements associated with aerodrome manual maintenance.
Learning Outcomes

For Delegates to feel confident about:

- their understanding of the functions of an Aerodrome Manual;
- being able to evaluate the effectiveness of the format of AMs in their own State/Company; and
- identify if and how improvements can be made.
Relevant ICAO Documents

- Annex 14, Volume I
Annex 14 Requirements (Standards)

As of 27 November 2003 States shall certify aerodromes used for international operations...

As part of the certification process, States shall ensure that an aerodrome manual which includes all pertinent information on the aerodrome...is submitted by the applicant for approval/acceptance prior to granting the certificate.
Aerodrome Manual (AM) - what is its function and who does it serve?

The aerodrome manual is a fundamental requirement of the certification process, and the safety regulator should establish the *structure and required content* of the manual. For the regulator the AM:

- should demonstrate that the aerodrome conforms to State requirements;
- contributes to the Regulator’s assessment of the Certificate Holders’/Applicant’s operational competence.
- is a reference guide for inspections.

**BUT**
Aerodrome Manual (AM) - what is its function and who does it serve? (cont)

- The AM is not just a reference document for the Regulator; indeed it could be argued that its primary purpose is to serve the airport operator in the same way that an operations manual does for an airline.
- So, it is a tool for the Airport Management and staff, both in operations and as a source of data, some of which will be shared with other stakeholders, such as airport users and contractors.
The Aerodrome Manual – some obligations

The AM is a living document, therefore:

CAA provisions should allow, and require, revisions to the document, in order to maintain its relevance and currency.

Information in the document must be kept current and accurate.

The aerodrome operator is and must be held accountable for:

- amending and controlling the manual, in order to ensure its accuracy; and
- its promulgation to necessary parties.
The Aerodrome Manual – some obligations (cont)

The operator must provide one complete, controlled and current copy to the CAA, and send amendments.

Adequate and controlled copies of current and complete AMs are to be kept at the aerodrome, with necessary and ready access (whole or part) to staff and permitted stakeholders.

Airport copies must be readily available for CAA inspection.
The Aerodrome Manual – some obligations (cont).

Preparation Requirements

Must be typewritten and:
- organized to facilitate preparation, review, and acceptance/approval;
- signed by the aerodrome operator;
- designed to be easily revised as needed; and
- subject to a document control process, including some form of page-log and revisions tracking system.
Amendments

- Aerodrome operator must alter or amend the aerodrome manual whenever necessary to maintain accuracy of the information.

- The CAA should establish formal amendment submission, review, and approval procedures.

- Procedures should allow the CAA to amend an aerodrome manual as necessary following a written directive to the operator.
Part 1: General information
Part 2: Aerodrome site information
Part 3: Aerodrome information required to be reported to the Aeronautical Information Services (AIS).
Part 4: Aerodrome operating procedures and safety measures.
Part 5: Aerodrome administration and safety management system information.
Content:
Specific - Part 1

- Purpose and scope of the aerodrome manual.
- The legal requirement for a certificate and an aerodrome manual as prescribed by State regulation.
- Certification requirements as prescribed by national regulation that are applicable to this specific aerodrome.
- Obligations on the aerodrome operator, including conditions of use imposed by the regulator.
- AIS, procedures and data promulgation.
- System for recording aircraft movements.
Aerodrome plan showing:
- Aerodrome boundaries.
- Main aerodrome facilities for its operation, including those outside the aerodrome boundary.
- Distance from the aerodrome to the nearest town, city, or population centre.
- Particulars of the title of the aerodrome site.
Content: Specific – Part 3

Aerodrome name.
Aerodrome location
Geographical coordinates, using WGS-84 reference datum.
Elevation
Threshold elevations and touchdown elevations for precision runways.
Aerodrome reference temperature.
Aerodrome beacon.
Name, address, and phone of aerodrome operator.
Runway information (including ACN/PCN)
Declared Distances, plus characteristics for strips, RESA, stop-way, and clear-way.
Taxiway information (including route designation details – common Standards for these in Annexes 11 and 14)
Apron information, including elevations and WGS 84 positions.
Comprehensive visual aids information
VOR checkpoint, altimeter checkpoint
Disabled aircraft removal plan.
Rescue fire-fighting coverage and level of protection.
Procedures for requesting the issue of NOTAMs and reporting any changes to aerodrome information set out in the State AIP

For the procedures to include:
- CAA addresses and numbers for reporting changes, for both during and after hours.
- Names of those responsible for reporting: both during and after hours.
- Arrangements for reporting changes.

For NOTAMs – procedures covering:
- What to report
- How to report
- How to track what has been reported
Content: Specific Part 4 (Movement Area Access)

Procedures, in coordination with the security agency to prevent:

- Unlawful interference.
- Unauthorized entry into the movement area by persons, vehicles, equipment and wildlife.

Roles and responsibilities: operator, FBOs, tenants, CAA, etc. etc.

- Names of those responsible for controlling access – including contact numbers both during and after hours.
Content: Specific Part 4 (Aerodrome Emergency Plan)

Plans for dealing with emergencies (Annex 14 AEP) on and in the vicinity of the aerodrome:

- Aircraft emergencies
- Sabotage
- Bomb threats
- Unlawful seizure of an aircraft
- Dangerous goods occurrences
- Building fires
- Natural disaster
- Public health emergencies
- Others as determined appropriate by local requirements or regulations.
- Details of emergency response tests of equipment and facilities
- Details of exercise used to test emergency plans, including frequency of testing.
- List of supporting agencies, organizations used in emergency planning and response (include names and numbers).
- Details of the aerodrome emergency committee
- Appointment of on-scene commander for overall emergency operations
Content: Specific Part 4 (Rescue Fire-Fighting)

- Facilities
- Equipment
- Personnel
- Names and numbers as appropriate

Note: Information should be covered in the AEP as well and should include information on any off-site agencies that may assist the aerodrome during an emergency event.
Content: Specific Part 4 (Aerodrome Inspections)

Inspection Procedures and arrangements for the movement area and Obstacle Limitation Surfaces, including:

- Communication protocols and arrangements
- Inspection types and intervals
- Names and numbers of those responsible
- Equipment required
- Particular or themed inspections such as friction surveys, obstacles surveys, etc.
- Logs, checklists and maintenance procedures associated with inspection paperwork.

Arrangements in relation to:

- Reporting
- Corrective action and tracking
- Follow-up procedures
Content: Specific Part 4 (Visual Aids/Electrical)

- Particulars of the procedures, including arrangements for the inspection and routine and emergency maintenance of:
  - aeronautical lights, signs, markings, and electrical systems;
  - visual aids; and
  - primary and secondary power systems.

- Arrangements for secondary power and dealing with outages.
  - Communication protocols.
  - Names and numbers of those responsible for electrical and visual aid systems (during and after working hours).
Content: Specific Part 4 (Movement Area Maintenance)

- Paved areas
- Unpaved areas
- Runway and taxiway strips.
- RESAs
- Airside roads
- Drainage systems
Content: Specific Part 4 (Safety – Aerodrome Works)

- Particulars of the procedures for planning and carrying out construction and maintenance work:
  - Communications and coordination with air traffic services
  - Names and numbers of tenants, FBOs, and others who would need to be notified of any work, and the Procedures for promulgating the details of the intended work, including NOTAM action, if necessary
  - Names and numbers of those responsible for planning and carrying out the work; for within and outside normal hours.
Content: Specific Part 4 (Apron Management)

- Policy statement on who has accountability for what happens on the ramp and when (positions/posts specified).
- Apron Management procedures, including:
  - Arrangements between: air traffic and apron management services; and airport and aircraft operators.
  - Gate and ramp space management and allocation, including equipment parking and storage areas
  - Engine start and push-back procedures
  - Marshalling service (if applicable)
  - Vehicle escort procedures (if applicable)
Procedures to ensure apron safety, including:
- Protection from jet-blast
- Safety during refuel operations
- Sweeping and cleaning of apron surfaces.
- Procedures for reporting Incident and accident on and around the apron

Arrangements for auditing the compliance of apron workers with operational procedures.
Procedures for the control of surface vehicles operating on or near movement areas, including:

- Applicable traffic rules
- Speed limits
- Enforcement procedures
- Driver training
- Requirements for granting permits
Procedures to deal with the threat posed by wildlife, including:

- Procedures for wildlife assessments.
- Procedures for implementing wildlife control programmes.
- Names and numbers of those responsible for wildlife control (during and after hours numbers)
Particulars setting out the procedures for:
- Monitoring the obstacle limitation surfaces, including the Type A Chart area.
- Controlling obstacles (developments) within the authority of the airport operator.
- Monitoring the height of buildings or structures within the boundaries of obstacle limitation surfaces.
- Notifying, and coordinating with the CAA regarding obstacles.
- Amending AIS publications as necessary due to obstacles.
Procedures for removing a disabled aircraft, including:
- Roles and responsibilities of the aerodrome operator and aircraft operator.
- Coordination with air traffic services
- Arrangements for necessary equipment and personnel.
- Names and numbers of those responsible (include during and after hours numbers)
Procedures for the safe handling and storage of hazardous materials, including:
- Arrangements for special containment areas.
- Methods for delivery, storage, dispensing, and handling of hazardous materials.

Note: Procedures for the response and clean-up of hazardous materials should be addressed in the emergency plan section of the ACM.
Particulars and procedures for low-visibility operations, including:
- Measurement of RVR
- Reporting of RVR
- Names and numbers of persons responsible for low-visibility operations (during and after working hours).
Particulars and procedures for the protection of sites for radar, radio, and navigational aids located on and around the aerodrome, including:

- Control of activities in the vicinity of radar and navigational aids.
- Arrangements for ground maintenance in the vicinity of these sites.
- Installation and maintenance of signs warning of hazardous microwave radiation.
Content: Specific Part 5 (Aerodrome Administration)

- Particulars of aerodrome administration, including:
  - An aerodrome organizational chart.
  - Names and numbers of persons with responsibility for aerodrome safety.
  - All aerodrome committees...Terms of Reference, structure, responsibility and general operating guidance.
Content: Specific Part 5 (Safety Management Systems)

- Particulars of the SMS, including:
  - Safety policy
  - *SMS organizational structure, including the accountable executive*
  - *Safety staffing, accountabilities, assignments and responsibilities.*
  - SMS strategy and planning.
  - SMS implementation plan.
  - SMS safety communications procedures
  - Safety measures programme
Particulars of the SMS, including:
- Hazard analysis and risk management procedures.
- Accident/incident investigation procedures.
- Internal safety audit programme
- Staff training and competency
- Safety promotion programme
- SMS documentation procedures
- Incorporation of safety clauses in construction contracts
Identify the requirements listed in Annex 14 regarding the development and maintenance of an aerodrome manual.

Identify and discuss the purpose/s of an Aerodrome Manual

Identify the general and specific content requirements of an aerodrome manual.

Discuss development and amendment requirements associated with aerodrome manual maintenance.
Thank you and Questions/Comments