



INTERNATIONAL CIVIL AVIATION ORGANIZATION

THE THIRD MEETING OF THE AERODROMES OPERATIONS AND PLANNING – WORKING GROUP (AOP/WG/3)

Malaysia, 2 – 4 June 2015

Agenda Item 4: Provision of AOP in the Asia/Pacific Region**SAMPLE APAC REGULATIONS FOR WATER AERODROMES**

(Presented by Maldives/Secretariat)

SUMMARY

This Paper presents for review and discussion the sample regulations developed by the small working group comprising of experts from Indonesia, New Zealand, Sri Lanka and USA and the best practices. The Meeting is invited to endorse the sample regulations for use in the APAC Region.

This paper relates to –

Strategic Objectives:

- A: Safety – Enhance global civil aviation safety*
- B: Air Navigation Capacity and Efficiency – Increase Capacity and improve efficiency of the global civil aviation system*
- E: Environmental Protection – Minimize the adverse environmental effects of civil aviation activities*

1. INTRODUCTION

1.1 APANPIRG/24 recognized the importance of developing seaplane bases (Water Aerodromes) which could be the best mode of transportation in geographical isolation in addition to providing recreational access and evacuation in emergencies. In this regard the AOPWG/2 Meeting noted the need for a model regulation on water aerodromes considering the growth in sea plane operations in APAC Region and proposed the establishment of Water Aerodromes Task Force to develop the model regulations for use as a reference document

1.2 The ATM/SG/2 agreed to the following Decision as a result of input from the AOP/WG:

Decision ATM/SG/2-7: Establishment of Water Aerodromes Small Working Group

That, the Water Aerodromes Small Working Group be established and comprising of experts from Indonesia, Maldives, New Zealand, Sri Lanka, and USA in order to develop a model regulation for water aerodromes for use as a reference document in the Asia/Pacific Region.

2. DISCUSSION

2.1 The experts from Indonesia, Sri Lanka and USA reviewed and offered comments on the draft version of the model regulation circulated by Maldives in September and November 2014. The third version of the draft was reviewed by the small working group in a face to face meeting held from 23 to 25 February 2015 in Maldives.

2.2 The Report of the meeting is available at http://www.icao.int/APAC/Meetings/2015%20WAWG1/Final%20Report%20WAWG-1_for%20website.pdf. The Sample APAC Regulations on Water Aerodromes (Version 4) are placed at Attachment for endorsement by the Group. The meeting may wish to consider the following Draft Decision:

Draft Decision AOPWG 3/xx - Sample Regulations for Water Aerodromes

That, the sample water aerodromes regulations developed by the small working group placed at **Attachment A** to this Working Paper be adopted for use as a reference document in the Asia/Pacific Region.

3. ACTION BY THE MEETING

- 3.1 The Meeting is invited to:
- a) endorse the sample APAC regulations on water aerodromes for use as a reference document in the APAC Region; and
 - b) discuss any relevant matters as appropriate.

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Sample APAC Regulations for Water Aerodromes

First Edition (unedited version) — March 2015

SAMPLE WATER AERODROME REGULATIONS [APAC]

MARCH 2015

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1.1 – General

1.1. This Sample Model Regulation provides general guidance to the State Administration for establishing national regulations for water aerodromes. This regulation shall be read in conjunction with ICAO Annex 14, Volume I and any other applicable regulations.

1.2 Operations on water differ significantly from those conducted on land, and the certification criteria for land aerodromes are inappropriate in some areas. Although based on the existing land aerodrome criteria, the different operational and safety risks when operating onto and from water have been recognized and addressed.

1.3 The process of granting a water aerodrome certificate is no different from that of a land aerodrome, and each application would be assessed on the ability to meet the relevant requirements. The certification criteria focus on those factors where water aerodromes differ from land aerodromes. These factors primarily include the physical characteristics of the operating environment, mooring procedures, and rescue and firefighting services; however, one fundamental certification criterion, that requires the certificate holder to establish and maintain an appropriate Safety Management System (SMS), remains the same.

1.4 The water aerodrome certification criteria are designed to cater for day and night, Visual Flight Rules (VFR) operations only.

1.5 In addition to aviation legislation, a seaplane in contact with the water is subject to maritime legislation; including the International Regulations for the Prevention of Collision at sea and local bylaws that are not addressed in this document. Where appropriate, certificate holders should consult with those bodies that have a regulatory or statutory interest in the use of, or in the operation of, an aerodrome within the authorized area.

1.2 – Access to Aerodromes

1.2.1 The operator of a water aerodrome shall allow the [State CAA] to inspect: water aerodrome facilities, equipment, services, operating procedures, water aerodrome operator's documents and records, and a Safety Management System for the purpose of aviation safety, or any other facility/documentation related to the water aerodromes that the [State CAA] considers relevant to the inspection.

1.2.2 The water aerodrome operator shall allow access for personnel authorized by the [State CAA] to any part of the water aerodrome or any facilities, equipment, documentation or records for the purposes of sub-regulation 1.2.1.

1.3 – Definitions for this Part

When the following terms are used in this regulation, they have the following meanings:

‘Seaplane’ – A fixed winged aeroplane which is designed for taking off and landing on water and includes amphibians operating as sea planes

‘Certificate Holder’ – The authorized operator of the water aerodrome

‘Aeroplane’ – A power-driven heavier than air aircraft deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight

‘Fixed Platform’ – A platform extending from the shore, on water and supported by pillars to hold it in position, intended to align alongside seaplanes for the purposes of embarkation and disembarkation passengers, cargo, fuelling or parking

‘Floating Platform’ – A platform placed on open water authorized for the purpose of embarkation and disembarkation of passengers or cargo by seaplane

‘Water Aerodrome’ – A defined area, primarily on water, intended to be used either wholly or in part for the arrival, departure and movement of aircraft, and any building and equipment on ground or water

‘Water Runway’ – A defined rectangular area on a water aerodrome, intended for the landing and take-off of aircraft along its length

‘Movement Area’ – The part of an aerodrome to be used for take-off, landing and taxiing of aircraft, consisting of the maneuvering area and platforms

‘Maneuvering Area’ – The part of an aerodrome to be used for take-off, landing and taxiing of aircraft, excluding the platform

1.4 – Standards for Water Aerodromes

1.4.1 The [Director General] may, in such manner as he thinks fit, publish a Manual of Standards(MOS) – Water Aerodromes, containing such standards, recommended practices and guidance material on water aerodromes as he may determine to be applicable in [State].

1.4.2 Any reference in these regulations to water aerodrome standards and practices is a reference to the standards and practices for water aerodromes that are set out in the Manual of Standards -Water Aerodromes as amended from time to time.

1.4.3 A water aerodrome operator shall comply with the standards, practices and procedures that are required by the MOS – Water Aerodromes, as appropriate to the operations conducted at the aerodrome and the requirements for aircraft using the aerodrome.

1.5 – Exemptions

1.5.1 The [State CAA] may, in writing, exempt a water aerodrome operator from compliance with the specified provisions of this regulation or specified standards set out in the water aerodrome standards.

1.5.2 Before deciding to exempt a water aerodrome operator, the [State CAA] shall take into account any relevant considerations relating to the safety of air navigation.

1.5.3 The water aerodrome operator shall present an aeronautical study to the [State CAA], that contains a risk analysis of that non-compliant water aerodrome standard(s) and demonstrate that the level of air navigation safety is acceptable to the [State CAA].

1.5.4 The validity of any exemption is dependent on the operator complying with any condition that the [State CAA] specifies in the exemption as being necessary in the interests of safety of air navigation.

1.5.5 The water aerodrome operator shall comply with the conditions specified in the exemption.

1.6 – Certified Water Aerodromes

1.6.1 Requirements for a water aerodrome certificate.

1.6.1.1 No person shall operate a water aerodrome unless it has been certified under this regulation.

1.7 – Application for an Aerodrome Certificate

1.7.1 **Application** – Application for water aerodromes shall be submitted in a form and manner acceptable to regulatory authority.

1.7.2 **Water aerodrome manual** – As part of the certification process, the applicant shall prepare and submit a Water Aerodrome Manual (WAOM) which will include all pertinent information on the water aerodrome site, facilities, services, equipment, details of all known obstruction to air navigation, operating procedures, organization, management including a safety management system and an emergency response plan for acceptance prior to granting the water aerodrome certificate.

1.7.3 **Onsite Inspection** – The applicant shall arrange an initial onsite inspection of the new proposed water aerodrome by the Regulatory Authority. Upon completion of establishment of the water aerodrome, a final inspection shall be conducted.

1.8 – Grant of an Aerodrome Certificate

1.8 The [State CAA] shall grant a water aerodrome certificate to an applicant under this regulation, if:

- a) the aerodrome's facilities services and equipment are in accordance with the standards specified in the MOS – Water Aerodromes, for a certified water aerodrome;
- b) the water aerodrome's operating procedures make satisfactory provision for the safety of the aircraft;
- c) the water aerodrome manual has been accepted by the CAA and it meets the requirements established in regulations ;
- d) the applicant would, if the certificate is granted, have adequate competent and qualified personnel to be able to properly operate and maintain the water aerodrome; and
- e) an acceptable aerodrome Safety Management System (SMS) is implemented.

1.9 – Amendment of a Water Aerodrome Certificate

1.9.1 A water aerodrome operator, holder of a water aerodrome certificate as established in 1.8, can request to the [State CAA] the amendment of the water aerodrome certificate when:

- a) there is a change in the ownership or management of the water aerodrome;
- b) there is a change in the use or operation of the water aerodrome;
- c) there is a change in the boundaries of the water aerodrome;
- d) there is any change on the original conditions of the water aerodrome certification.

1.10 – Duration of an Aerodrome Certificate

1.10 A water aerodrome certificate shall remain in force until it is suspended or cancelled or alternatively the certificate shall be valid for [] years whichever is earlier.

1.11 – Suspension or Cancellation by the [State CAA]

1.11.1 The regulatory authority may suspend or cancel a water aerodrome certificate if there are reasonable grounds to believe that:

- a. a condition to which the water aerodrome certificate was subjected has been breached or not complied with;
- b. the water aerodrome facilities, operations or maintenance are not up to the standards required in the interests of the safety of air navigation.

1.11.2 Before suspending or canceling a water aerodrome certificate, the regulatory authority must give to the holder of a Water Aerodrome Certificate a notice that describes the non-compliance with this regulation and invites the holder to submit a corrective action plan acceptable to the regulatory authority.

1.11.3 The regulatory authority may take into account any reasons the holder provides within the time allowed, prior to making a decision about suspension or cancellation.

1.12 – Cancellation at request by the holder

1.12.1 If the holder of a water aerodrome certificate wishes to surrender the certificate, the holder shall give not less than [time period to be specified by the State CAA] days written notice to the [State CAA] of the date on which the holder will surrender the certificate.

1.12.2 The [State CAA] shall cancel the water aerodrome certificate on the date specified by the certificate holder for surrender of the certificate.

1.13 – Return of certificate if cancelled

1.13.1 If the [State CAA] cancels a water aerodrome certificate, the person who was the certificate holder shall return the water aerodrome certificate to the [State CAA] immediately.

1.14 – Transfer of a Water Aerodrome Certificate

1.14.1 The [State CAA] may give its consent to and issue an instrument of transfer of a water aerodrome certificate to a transferee when:

- a) the current holder of the water aerodrome certificate notifies the [State CAA], in writing, at least [time period to be specified by the State CAA] days before ceasing to operate the water aerodrome, that the current holder will cease to operate the water aerodrome as of the date specified in the notice;
- b) the current holder of the water aerodrome certificate notifies the [State CAA], in writing, of the name of the transferee;
- c) the transferee applies to the [State CAA], in writing, within [time period to be specified by the State CAA] before the current holder of the water aerodrome certificate ceases to operate the water aerodrome for the certificate to be transferred to the transferee; and
- d) the requirements set out in regulation are met in respect of the transferee.

1.14.2 If the [State CAA] does not consent to the transfer of a water aerodrome certificate, it shall notify the transferee, in writing, of its reasons no later than [time period to be specified by the State CAA] days after making that decision.

1.15 – Interim Water Aerodrome Certificate

1.15.1 The [State CAA] may grant an interim water aerodrome certificate to an applicant if the [State CAA] is satisfied that:

- a) a water aerodrome certificate in respect of the aerodrome will be issued to the applicant or transferred to the transferee as soon as the application procedure for the grant or transfer of a certificate has been completed; and
- b) the grant of the interim certificate is in the public interest and is not detrimental to aviation safety.

1.15.2 An interim water aerodrome certificate issued pursuant to sub-regulation 1.15.1 shall expire on:

- a) the date on which the water aerodrome certificate is issued or transferred; or
- b) the expiry date specified in the interim water aerodrome certificate; whichever is earlier.

1.16 – General Operating Conditions

1.16.1 The water aerodrome operator shall take all reasonable measures to ensure that obstacles at, or within the vicinity of the aerodrome are detected and reported to the regulatory authority as quickly as possible.

1.16.2 No person shall operate any device on any water aerodrome to which these regulations apply which may cause interference to communication between aircraft and ground.

1.16.3 During operational hours, the water aerodrome operator shall ensure that the movement area is free of hazards.

1.16.4 The water aerodrome operator may take all reasonable actions to remove any object or vessel anchored, moored or otherwise within any water aerodrome in contravention of this regulation.

1.16.5 The water aerodrome operator is responsible for ensuring that no unauthorized person shall enter or remain in a water aerodrome to which these regulations apply to promote the safety of all aircraft and their passengers, cargo and crew during operational hours.

1.16.6 Information relating to the certified water aerodromes shall be published by the regulatory authority in the Aeronautical Information Publication.

1.16.7 If a certified water aerodrome is available for an aircraft to land or take-off at night or in less than Visual Meteorological Condition (VMC) during the day, the operator of the water aerodrome shall provide and maintain a lighting system for the movement area of the water aerodrome.

1.17 – Provision and Location of the Water Aerodrome Manual

1.17.1 The operator of a certified Water Aerodrome shall have an approved aerodrome manual, in accordance with the requirements of this regulation.

1.17.2 The operator's water aerodrome manual and any amendments thereto shall be acceptable to the [State CAA].

1.17.3 The operator shall give the [State CAA] a copy of the manual and shall keep another copy at the aerodrome. If the operator's principal place of business is not at the aerodrome, an additional copy of the manual shall also be kept at the principal place of business.

1.17.4 The operator shall make the copy of the manual kept at the aerodrome, and the operator's principal place of business if applicable, available for inspection by authorized persons whenever the aerodrome is operational.

1.18 – Information to be included in the Aerodrome Manual

1.18 For sub-regulation 1.17, the aerodrome manual shall include the information as contained in the MOS.

1.19 – Form of Water Aerodrome Manual

1.19.1 Unless otherwise approved by the [State CAA], the operator of a certified water aerodrome shall keep the master copy of the aerodrome manual for the aerodrome in a printed form.

1.19.2 Other copies of the manual may be kept in a printed or an electronic form.

1.19.3 The manual may consist of more than one part.

1.19.4 The operator shall keep the manual updated so that a person reading the manual shall know:

- a) when changes have been made to the information in the manual; and
- b) whether the manual is up-to-date.

1.20 – Amendments of the Aerodrome Manual

1.20.1 The operator of a certified water aerodrome shall amend the aerodrome manual, whenever it is necessary to do so, to maintain the accuracy of information in the manual. Any amendments to the aerodrome manual shall be made in accordance with the procedure that is acceptable to the State CAA,

1.20.2 To maintain the accuracy of the aerodrome manual, the [State CAA] may give written direction to the operator requiring the operator to amend the manual in accordance with such a direction.

1.20.3 An operator shall comply with a direction given to the operator under sub-regulation

1.21 – Aerodrome Manual Procedures

1.21.1 Subject to any directions issued under sub-regulation 1.21.2, the operator of a certified water aerodrome shall operate and maintain the aerodrome in accordance with the procedures set out in the aerodrome manual for the aerodrome.

1.21.2 The [State CAA] may direct the operator of a certified water aerodrome to change the procedures set out in the aerodrome manual, if the [State CAA] considers such changes to be necessary in the interests of the safety of air navigation.

1.21.3 An operator shall comply with a direction given to the operator under sub-regulation

1.22 – Care and Diligence in Operation and Maintenance

1.22.1 The operator of a certified water aerodrome shall ensure that the aerodrome is operated and maintained with a reasonable degree of care and diligence.

1.22.2 A water aerodrome operator shall implement a maintenance program at the aerodrome. Such a maintenance program shall comply with the requirements specified in the Manual of Standards (MOS) – Water Aerodromes and shall include preventive maintenance work as well as routine inspections and corrective maintenance work.

1.23 – Aerodrome Condition Notification

1.23.1 The operator of a certified water aerodrome shall notify the Aeronautical Information Service (AIS), as soon as practicable (for the issue of a Notice to Airmen [NOTAM]), of any aerodrome operational condition or defect at the aerodrome that may affect the safe operation of aircraft.

1.23.2 Each holder of a water aerodrome operating certificate shall establish procedures for restricting aircraft operations where an unsafe condition exists on an aerodrome.

1.23.3 The procedures shall ensure that operations are not conducted on portions of the aerodrome where such an unsafe condition exists.

1.24 – Notice of Deviation

1.24.1 This regulation applies if a deviation from a procedure set out in the aerodrome manual for a certified water aerodrome is made to ensure the safety of aircraft.

1.24.2 The operator of a water aerodrome shall inform the [State CAA] in writing, of the deviation within [time period to be specified by the State CAA] days after the deviation was made.

1.25 – Notice of Changes in Physical Condition of Aerodrome

1.25.1 The operator of a certified water aerodrome shall, in accordance with the aerodrome standards, give notice to the [State CAA] of:

- a) any temporary or permanent change in the physical condition of the aerodrome that may affect the safety of aircraft; and
- b) any other occurrence relating to the operation or maintenance of the aerodrome that may affect the safety of aircraft.

1.25.2 If the water aerodrome is a controlled aerodrome, the notice shall also be given to air traffic control.

1.26 – Notice of Changes in Information Published in the AIP

1.26.1 To maintain accuracy of the information published in Aeronautical Information Publications (AIP) relating to a certified water aerodrome, the operator of the aerodrome shall inform the [State CAA], in writing, as soon as practicable of any change required to that information.

1.27 – Physical Characteristics of Movement Area

1.27.1 The operator of a certified water aerodrome shall ensure that the physical characteristics of the movement area comply with the standards set out in the manual of aerodrome standards.

1.28 – Aerodrome Markings

1.28.1 The operator of a certified water aerodrome, where practicable, shall mark the following areas of the aerodrome in accordance with the standards set out in Manual of water aerodrome standards.

- a) the movement area;
- b) any unserviceable area;

- c) any obstacle; and
- d) any works area on or near the movement area.

1.28.2 The operator shall ensure that all aerodrome markings are maintained in accordance with the standards set out in the MOS – Aerodromes.

1.29 – Wind Direction Indicators

1.29.1 The operator of a certified aerodrome shall, in accordance with the standards for wind direction indicators set out in the MOS – Water Aerodromes [to be determined], shall install, where practicable, and maintain at least one wind direction indicator at the aerodrome.

1.30 – Lighting of Movement Area

1.30.1 If a certified water aerodrome is available for an aircraft to land or take-off at night or in less than Visual Meteorological Condition (VMC) during the day, the operator of the aerodrome shall provide and maintain a lighting system for the movement area of the aerodrome that is in accordance with the MOS – Water Aerodrome.

1.31 – Aerodrome Emergency Plan

1.31.1 The operator for a certified Water Aerodrome shall prepare an aerodrome emergency plan.

1.31.2 The plan shall include:

- a) activities commensurate with the aircraft operations and other activities conducted at the aerodrome;
- b) procedures for coordinating the responses of all actions to be taken in the event of an emergency occurring on or in the vicinity of the aerodrome;
- c) if the aerodrome is located in or near a difficult environment/terrain and a significant portion of approach or departure operations takes place over these areas, coordination with readily available appropriate specialist rescue services; and
- d) human factor principles to ensure optimum response by all agencies participating in the emergency situations.

1.32 – Aerodrome Emergency Committee

1.32.1 The operator of a certified water aerodrome shall establish an aerodrome emergency committee as defined in MOS – Water Aerodrome Standards.

1.33 – Safety Management System

1.33.1 The operator of a certified water aerodrome shall ensure that the aerodrome has an acceptable Safety Management System (SMS) that shall:

- a) be established in accordance with the framework elements contained in ICAO Annex 19; and
- b) be commensurate with the size of the aerodrome operator and the complexity of the aerodrome.

Note: The water aerodrome operator may apply a common SMS policy to all water aerodromes under its control, subject to acceptance by the [State CAA]

1.34 – Aerodrome Rescue and Firefighting Services

1.34.1 Rescue and firefighting equipment and services shall be provided at an aerodrome as directed by the [State CAA], and where so directed shall be in accordance with the specifications provided in the MOS – Water Aerodrome Standards.

1.35 – Obstacle Limitation Surfaces (OLS)

1.35.1 Obstacles limitation Surfaces of the Water Aerodrome shall be established as per MOS – Water Aerodrome Standards.

1.36 – Wildlife Hazard Management

1.36.1 The operator of a certified water aerodrome shall provide a Wildlife hazard management plan that includes the identification of the risk and hazards that may exist, and suitable mitigation measures as per MOS – Water Aerodromes Standard.

1.36.2 All reasonable measures shall be taken to discourage Wildlife from gathering in the movement area, and under anticipated departure and arrival flight paths.