



INTERNATIONAL CIVIL AVIATION ORGANIZATION

SECOND MEETING OF WATER AERODROME SMALL WORKING GROUP
(WASWG/2)

Colombo, Sri Lanka, 29 February to 2 March 2016

Agenda Item 4: Discuss draft water aerodrome standards

**OVERVIEW OF FEDERAL AVIATION ADMINISTRATION
(FAA) ADVISORY CIRCULAR (AC) 150/5395-1A (SEAPLANE
BASES)**

(Presented by United States of America)

SUMMARY

FAA AC 150/5395-1A provides that standards for the operation of seaplane bases within the United States of America. It is intended to assist operators in planning, designing, and constructing seaplane bases and associated facilities.

1. INTRODUCTION

1.1 Sea plane offer the unique ability to provide the service of aircraft speed with the utility of a boat. Therefore, standards that apply to seaplane bases (or water aerodromes) must be unique also. This also is not intended to supplant standards for land airports or flying activities, but to independently provide guidance for float planes, flying boats and amphibious aircraft. Additionally, sea plane service is essential as it not only offers commercial transportation service but also offers recreational flying activity and economic benefits such as tours for visitors.

2. DISCUSSION

2.1 A basic public-use seaplane base, which is within a suitable water operating area, consists of approach/departure paths, designated sea lane(s), taxi channel(s), an anchorage area, and a shoreline ramp or pier. They are considered airports, so to establish or modify one, a notice to the FAA is required under 14 Code of Federal Regulation (CFR) Part 157 (Notice of Construction, Alteration, Activation and Deactivation of Airports). The review by the FAA could lead to no objection, no objection with comments, or objectionable. All seaplane base development financed by the FAA must be in accordance with an FAA approved Seaplane Base Layout Plan (SBLP). There are other federal and state agencies that may need to grant approval also.

2.2 Site selection for a seaplane base is very critical and often dependent on the type of sea plane that it is utilized by: floatplanes (fitted with floats or pontoons), flying boats (the bottom of the fuselage is the main landing gear) or amphibians (floatplanes or flying boats that are equipped with retractable landing gear for operation on land, whether from the air or water). It is also determined by other factors such surround public obstructions, water currents, area geography, local regulations, noise considerations, the presence of other airports in the area, public accessibility, the presence of wildlife, development of the surrounding area and commercial or recreational boating activities.

- It is important to keep in mind the characteristics of seaplanes. For example, they have no brakes and are more susceptible to wind and water current. Therefore, when designing a seaplane base, enough space should be accounted for when the seaplanes are in operation. Recommended sea lane dimensions, water depths and approach slopes are provided in the AC.

Table 2-1. Recommended Sea Lane Dimensions, Water Depths, Approach Slopes in Feet (Meters)

Minimum length Notes 1, 2	Minimum width	Minimum water depth Note3	Remarks
2,500	200	3 Note 4	Minimum for limited float plane operations. Approaches should be 20:1 or flatter for a distance of at least 2 miles.
3,500	300	4 Note 4	Minimum for limited commercial operations. Approaches also used for departures should be 40:1 or flatter for a distance of at least 2 miles.
5,000	500	10	Minimum for extensive commercial operations. Approaches also used for departures should be 40:1 or flatter for a distance of at least 2 miles.
10,000	700	15	Generally unlimited. Approaches also used for departures should be 50:1 for a distance of 2 miles.
<p>Notes:</p> <p>(1) The lengths indicated in the table are for calm water, no wind, sea level elevation conditions at the standard temperature of 59 degrees Fahrenheit.</p> <p>(2) The length shown shall be increased (corrected length) at the rate of one-half of one percent for each degree that the mean temperature of the hottest month of the year averaged over a period of one year exceeds the standard temperature of 59 degrees Fahrenheit.</p> <p>(3) The length shown needs to be increased by 7 percent per 1000 feet (300 m) of elevation above sea level to compensate for the change in density altitude.</p> <p>(4) Although a depth of 6 feet (1.8 m) is preferable, a minimum depth of 3 feet (1 m) is adequate for single-engine operations.</p>			

- It is recommended that approach and departure paths for sea lanes be over water for to protect people and property on land. With respect to the sea lanes themselves, some are unmarked, which provides flexibility for pilots, however according to 14 CFR 77.3, a seaplane base is considered an airport only if the sea lanes are outlined with visual markers. Part 77 provides for the protection of navigable airspace.

2.3 There are 3 types of facilities for seaplanes:

- Off-Shore Facilities – In addition to a sea lane and taxi channel, this type of facility includes an anchorage area.
- Shoreline Facilities – This type of facility is partly on both land and water. In general, allow the plane to be tied to or accessible from land, without having to remove the plane from the water (i.e. piers) or for a plane to be removed from the water for servicing (i.e. ramps).

- On-Shore Facilities – Depending on the needs of a seaplane base, on-shore facilities such as service aprons, storage/tie-down areas, marine fueling, public use facilities, and hangars.

2.4 Seaplane base identification and lighting for night time and low visibility operations is important. Rotating beacons, wind cones and shoreline floodlights all help to enhance safety and visibility.

2.5 It is important to consider local and federal environmental regulations when performing construction of sea pane bases.

2.6 The Seaplane Base AC can be found here:

- http://www.faa.gov/documentLibrary/media/Advisory_Circular/150_5395_1a.pdf

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) Note the contents and conclusions of this paper; and
- b) Consider adoption or implementation of the technologies and/or processes discussed to address the on-going safety challenges faced by airports.

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