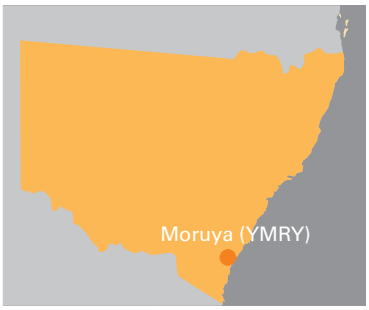
AVIATION WEATHER HAZARDS

Moruya Airport (YMRY)



Latitude: S35 89.8

Longitude: E150 14.4

Height above mean sea level: 14 ft

This pamphlet describes hazardous weather conditions and climatological information for Moruya Airport. It has been prepared by staff of the New South Wales Regional Forecasting Centre and is intended to provide an overview of potentially hazardous weather conditions at Moruya. Pilots should regard this publication as information provided in support of official forecasts.

Moruya Airport. Photo courtesy, Tom Minchin.

Introduction

Moruya Airport is situated on the south coast of New South Wales approximately 300 kilometres south of Sydney City. The Great Dividing Range runs from the north-west to south-west of the airport with elevations of 600–700m (1900–2300 ft) at points closest to the aerodrome. The Tasman Sea is situated to the east within 500 metres of the north-south runway. The Moruya River lies to the south and west of the airport running parallel to the east-west runway.

Fog/Mist

Due to its proximity to several moisture sources, Moruya offers ideal conditions for fog formation. Fog affects Moruya on average about 40 days per year, more commonly during the autumn months.

Light southwest to northerly surface winds provide the greatest risk for fog development in the area. It is extremely rare for fog to occur when the surface winds have an easterly component or exceed 5 knots. Most fogs clear within four hours of onset and in most cases clear by 21Z.

Reductions in visibility at the aerodrome are not only due to fog events but also sea spray/mist. This local phenomenon is driven by onshore flow from surrounding water sources and can frequently be confined to the NW quadrant of the aerodrome (location of the BoM observation site). In most situations, the visibility reductions are confined to a shallow layer 2–3 m above the surface and on occasion have no impact on airport operations. This local phenomenon is most noticeable during the summer and early autumn months.

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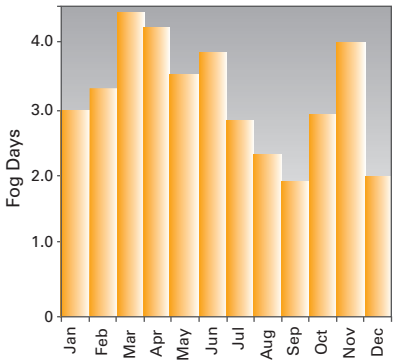
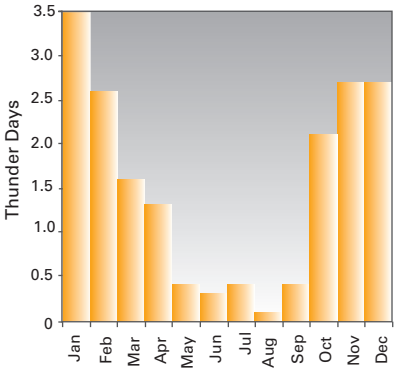
Sea spray/mist at Moruya Airport. Photo courtesy, Jim Brown.



Average number of days with fog for Moruya Airport (last 10 years).



Average thunder days per month for Moruya Airport (last 10 years).

Thunderstorms

Thunderstorms at Moruya occur about 18 days per year on average, with most occurring in the spring and summer months. Thunderstorms commonly form on the ranges to the north-west, west and south-west of the airport. If the steering winds aloft contain a westerly component, the storms may move off the ranges and affect Moruya.

Thunderstorms can also arise in situations where low level convergence forms as the result of the sea breeze. The chance of thunderstorms increases when the airmass is unstable and moisture is feeding in from the Tasman Sea.

Severe thunderstorms with heavy rain and hail are possible during the spring and summer months. Unlike other coastal aerodromes, Moruya is less likely to be affected by severe thunderstorms as it maintains ample distance from the surrounding ranges. As storms move away from the ranges, they begin to weaken.

Wind

Due to the proximity of Moruya Airport to the sea, the time of day and season has a large influence on the wind direction.

Common morning wind conditions

Caused by the katabatic flow off the ranges, morning winds tend to blow from the south-west. These morning south westerlies are most common in the winter months and can be strong as a result of the surrounding topography. Wind conditions blowing from the south, south-west and north-east tend to be strongest during this time of day, with half of all wind conditions encompassing a westerly component.

Common afternoon wind conditions

Most likely due to the local sea breeze, afternoon winds tend to blow from a north-easterly direction. Half of all summer days in this region feature an afternoon sea breeze from the north-east with easterly winds also a common occurrence. Wind conditions blowing from the north-east and south tend to be strongest during this time of day with half of all afternoon wind conditions throughout the year comprising of an easterly component.

While relatively uncommon, winds from the north-west are regarded as most dangerous to aerodrome operations, as these types of conditions increase the likelihood of moderate to severe turbulence in the region (please refer to the turbulence subsection for more information).

Turbulence

Significant turbulence occurs occasionally at Moruya Airport. Turbulence at Moruya is commonly felt when winds are from the north-west, due to the proximity and steepness of the ranges in that quadrant. Despite the ranges in the west and south-west having higher elevations, they are further removed from the aerodrome and therefore any pure westerly or south-westerly winds are less of a risk. Severe turbulence is rare and typically only occurs when the north-westerly winds are very strong.

Turbulence at Moruya is understood to be less severe and less common than at other coastal locations due to its distance from the ranges.

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