

# Weather or Not?

The CAA has become aware of an increasing trend for GA pilots to fail to get adequate pre-flight weather information, either by not bothering to get any form of forecast, or by getting inappropriate information for the planned flight. Given the range of services available to obtain this information, and the fact that many of them are free (or very low cost), this is both surprising and a cause for concern. There is also evidence that some weather-related decision-making has not been up to the standard required. The following text outlines some issues for you to consider with respect to aviation weather.

## Weather Variation

Something that every pilot can agree on is that our weather is changeable and can be difficult to predict. Weather can vary in a given location over relatively short periods. How many times have you gone to work in fine weather and come home in rain? Weather can also change markedly over small distances, the most obvious example being the difference between west and east coasts. A half hour drive can take you from brilliant sunshine and drought to overcast and drizzle.

It is therefore possible, even on a short local flight, to encounter marked changes in the weather. Such changes can be brought about by rapidly approaching or departing fronts, or by local diurnal effects. Coastal areas in particular can often see areas of low cloud sweep in from the sea, turning clear days into marginal VFR in a matter of minutes. Provided the pilot is being vigilant in monitoring local conditions, this should not prove too big a hazard, since a landing back at the home airfield is usually an available option.

Of greater concern is a cross-country flight. The pilot may be faced with weather that changes en route, and also destination weather that can change during the course of the flight. Have you ever been on a flight where the destination weather was not what you expected when you departed?

## Weather Information

There are really only three sources of information for the pilot regarding weather – what the pilot can personally see or observe, someone else's observations, and someone else's forecasts.

The best of these is the pilot's own observations. This is the weather that the pilot can directly relate to – it is here and now, not a maybe, not historical, not someone else's interpretation. The pilot will best appreciate how the observed conditions will affect the desired flight



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path, aircraft type, passengers and personal minimums. As part of the regular activity cycle, the pilot must be constantly monitoring the weather conditions, both ahead and behind (in case a turn back is necessary). Get used to interpreting the phenomena you can see or feel – cloud, indications of

wind, drift, reducing visibility, turbulence – and applying that to your decision-making process.

Conditions may well be fine at your departure airfield but be unsuitable down track. At worst, this could put you in a bad situation. Conversely, you might save yourself a lot of precious dollars by avoiding the necessity to turn back half way. Therefore, for any flight that will exceed the distance that the pilot can see from departure airfield, some form of forecast, combined with actual observations both en route and at the destination, is a prudent precaution.

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## Weather Forecasts

It is all very well having a look at the weather on the TV news or in the local paper, possibly supplemented by a phone call to someone at your destination. We need, however, to be aware that general weather forecasts are designed for the general public, not aviators, and they do not cover information vital to pilots. Also, they do not cope well with local effects, being general rather than specific. The phone call to the destination is great for confirming the forecast (as long as the person describing the weather knows what they are talking about in pilot terms), but remember that weather can change while you are en route.

Meteorological information tailored specifically for pilots is now freely available through the Airways web site ([www.ifis.airways.co.nz](http://www.ifis.airways.co.nz)) or by using Fax on Demand. It is there, it is free – use it! You can also get NOTAMs at the same time. MetService is also currently trialling a web site for aviation meteorological information. This site not only contains the traditional GAWX, METARs and TAFs, but also (and this is significant) forecast charts, satellite imagery, weather radar imagery, and detailed area forecasts. This will be a great asset for aviators and should be fully utilised.

Don't forget to obtain the appropriate GAWX forecast as well as TAFs and METARs for your destination and enroute airfields. TAFs and METARs are specific, and will take into account local effects that may affect a given airport and **should not be solely relied upon** for enroute planning. The GAWX forecast gives you the big picture in plain language, and also it gives you essential enroute information not contained in TAFs, including winds for planning purposes (up to 9000 feet), freezing level information, cloud top heights, icing, and turbulence. This information will give an indication of whether your intended route is a practical option.

## Enroute Weather Updates

While en route, continually monitor the weather conditions, both through your own observations and from the various reports available. These include ATIS broadcasts and METARs, SPARs or SPECIs broadcast by Christchurch Information or other ATC units. You may also hear weather reports from other pilots. If in doubt, ask. You will not be charged anything for any enroute weather request made to ATC.

## Unforeseen Weather

With the best of planning, you may encounter conditions significantly different from those forecast. The accompanying article, "Convergence Zones", by Erick Brenstrum of the

MetService, neatly illustrates the dynamic nature of aviation weather in New Zealand and the difficulty in forecasting weather that could be of concern to pilots. In future *Vector* articles we will look at other such weather phenomena that pilots can encounter in New Zealand.

If you do run in to unforeseen bad weather, let someone (preferably ATC) know. The new information may be of immediate value to other pilots, as well as allowing MetService and Air Traffic Services to take appropriate amendment or warning action.

Being faced with bad weather – observed, forecast or unexpected – provides one of the sternest tests of a pilot's judgement and self-discipline. Decision time – press on, divert, or retreat?

One of the problems pilots have in making that decision is that they often ask themselves the wrong question. Being goal-oriented people, they tend to ask "How can I get to my destination in these conditions?" rather than first thinking "Is it a good idea to try to get to my destination in these conditions?" The first question does not allow for the possibility of diverting or waiting. The decision to press on has subconsciously already been made, so the problem becomes a technical one of "How do I do it?" rather than "Should I do it?" External pressures, such as passenger demands, can exacerbate this, as can 'get-home-itis'. It is far more likely to get the pilot into difficulty with weather than asking oneself if it is a good idea in the first place. If in doubt, don't press on. Better to arrive late than dead on time!

## Summary

Weather in New Zealand is highly variable, a fact of which we are all well aware. Changes can occur rapidly in both time and place. While no forecast can be guaranteed to be 100 percent accurate, the prudent pilot obtains all available information and combines this with personal observation to determine whether a given flight is safely achievable. The pilot then monitors conditions while in flight, again using all available means, to ensure that the flight comes to a safe and comfortable conclusion – even if means changing your original plans. Delays due to weather are an unavoidable consequence of flying GA aircraft in New Zealand. Remember the old adage 'time to spare, go by air', and accept it as a small price to pay for the privilege of flying in this wonderful country of ours. ■

*The least experienced press on while the more experienced turn back to join the most experienced, who never left the ground in the first place.*