



D-DAY AND THE IMPORTANCE OF METEOROLGY

Being an island, Meteorology – predicting the weather forecast, has always been an important feature of all military warfare between the British Isles and the European continent.

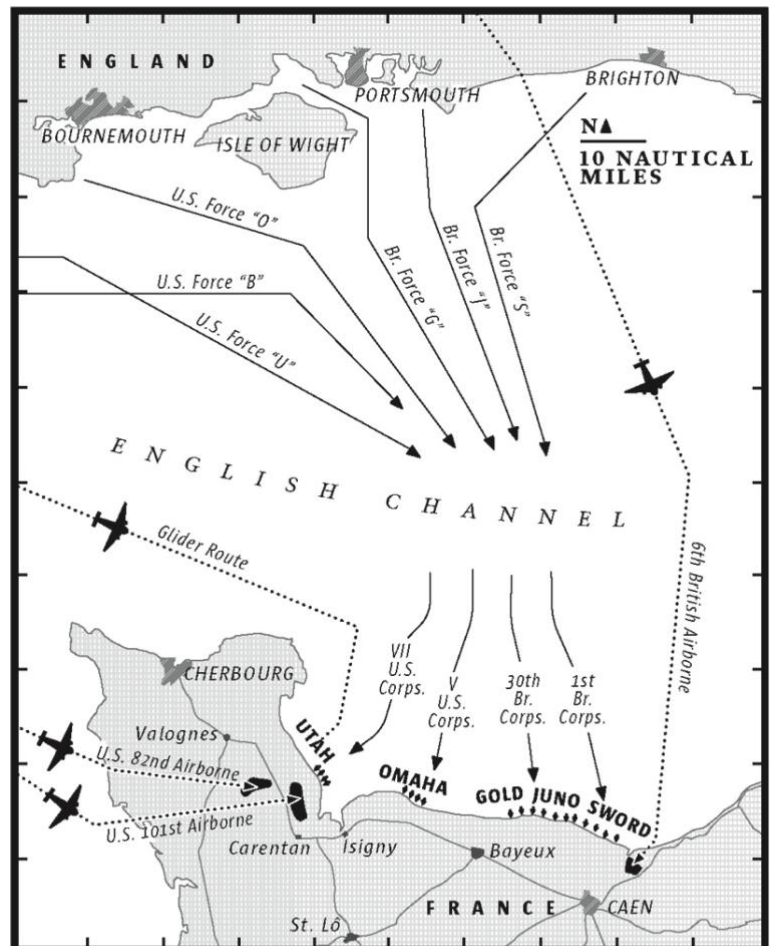
In the Second World War, predicting the weather was key to lots of operations. The techniques of doing so became more sophisticated due to innovations and investment. The developments in meteorology during the war, is the basis for forecasting the weather today.

Some of the elements involved include: ‘observation stations, telecommunications, training, research, administration and international co-operation’ Prof Julian Hunt, Chief Exec of the Met Office.

Predicting the weather for D-Day was of paramount importance for its success. Learning about both the complexity of the preparations and the skills of the meteorologists, helps us understand and remember their contributions.

OPERATION NEPTUNE

The preparations for crossing the English Channel to gain control of German occupied Europe, was code-named Operation Neptune and the British, American and Russian allies decided June 1944 was the month to both attack the East and the West. General Eisenhower thought the attack on Normandy should be on June 5th.



Michelle Doe, The Denver Post





In order for the landing crafts and parachute drops to arrive safely and secretly to attack the Germans on the Normandy beaches, they needed:



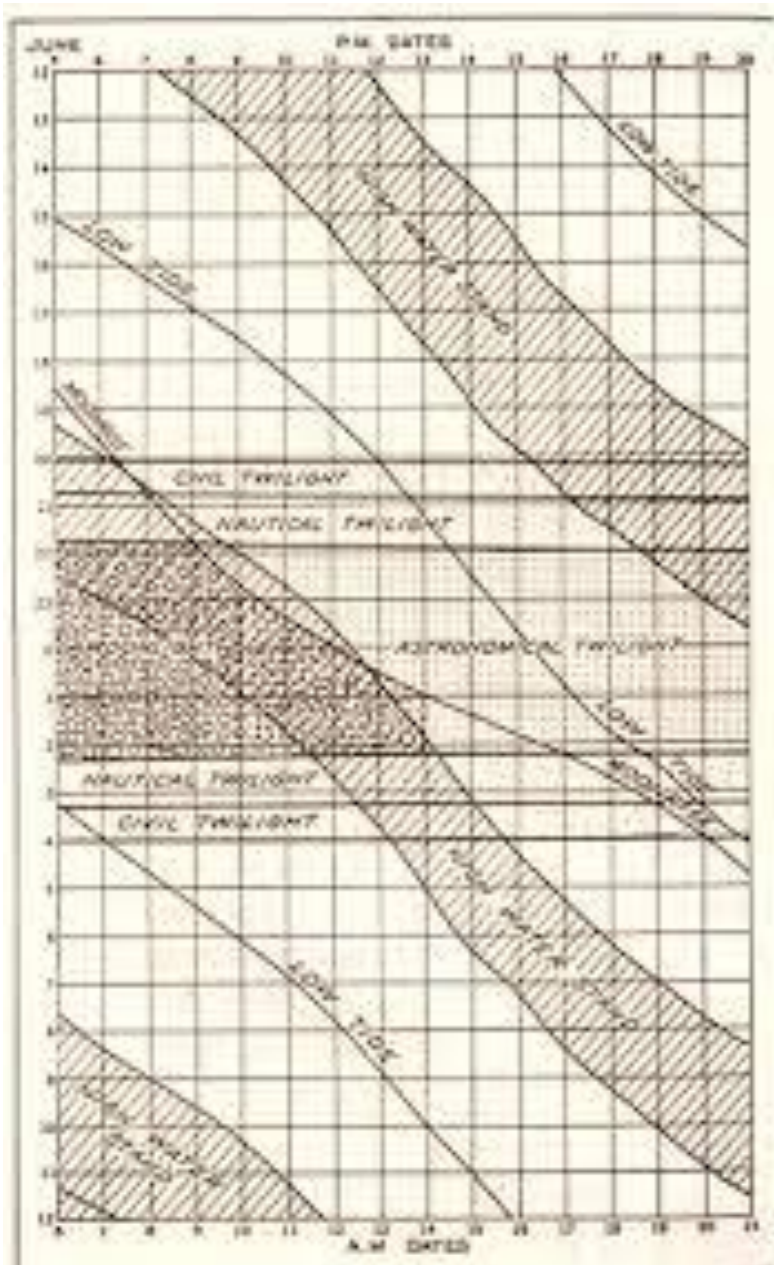
Coming ashore from a landing craft © IWM B5245

- A moonlit night – ideally within one day before and four days after a full moon;
- A low tide at dawn;
- Good visibility;
- Light winds and not much low cloud both during the day and for several days after that.





In order to assess this, experts needed to look at both the cycle of the moon through astronomical tables and the tide tables – to see how close to beaches, the boats and landing crafts could land. Only 3 days in June - 5, 6, 7 would be possible, but then the wind and the general weather had to be right as well.



Today, we're used to 'mainly' accurate forecasts each hour, up to 10 days ahead but seventy five years ago, it was difficult to produce seven day forecasts. As The D-Day Operations were to include airborne forces – dummy parachutists from the Royal Air Force were dropped in the evening before, the Navy manned the landing vessels and the Army, carrying all the soldiers who led the attacks once they were on the beaches. Added to the complications of the three Armed Forces collaborating together was the fact that as well as the British Forces, the Canadians and Americans were part of the plan as well. So everything had to be arranged very carefully in secret. Communication was carried out through 'scrambled' telephone conferences using a secure telephone system.





The attacks involved multiple elements including loading and preparing ships in advance of the operation, so planning had to be absolutely accurate.



Vehicles being stored © SC 187235

Ships being loaded © IWM A24222

By 3rd June, Dr James Stagg (RAF and Met Office) alerted General Eisenhower to changes in the weather predictions and advised that Operation Neptune should be delayed until 6 June. The big storm which had risen would, he believed, be slowing, thereby allowing for an 8 hour window in which the Operation could take place. Although he couldn't be nearly as sure as we would be today, that his forecast was accurate, he persuaded Eisenhower to delay the Operation.





As things turned out, Dr Stagg was correct and the weather on 6 June was favourable to the Operation and also allowed for an important element of surprise. Had they delayed it to the next suitable tides, he noted, they would have encountered the worse weather in the English Channel for 20 years which would have been disastrous!

Thanks and thank the Gods of War we went when we did
wrote General Eisenhower.

Prime Minister Winston Churchill called Operation Neptune:

The most complicated and most difficult that has ever taken place. It involved tides, winds, waves, visibility, both from the air and sea standpoint, and the combined employment of land, air and sea forces in the highest degree of intimacy and in contact with conditions which could not and still cannot be fully foreseen.



United to Liberate © ART IWM PST 8092





DR JAMES STAGG

30 June 1900 – 23 June 1975

James Stagg was born in Dalkeith in Scotland and went to school in Edinburgh. He studied physics at Edinburgh University before working as a Science teacher at George Heriot's School in Edinburgh.

In 1924 he became an assistant in the British Meteorological Office and in 1932 he led an Expedition to the Canadian Arctic. He went on to be Superintendent or Head of the Observatory at Kew Gardens.

In 1943 he became Group Captain in the Royal Air Force and was appointed the chief meteorological officer for Operation Neptune.

Stagg was given the Legion of Merit by the US and the Order of the British Empire (OBE) in 1945 in recognition of his contribution to the D-Day Landings.

Last year, a play called *Pressure* was written about his contribution.



Dr James Stagg © RMetS

