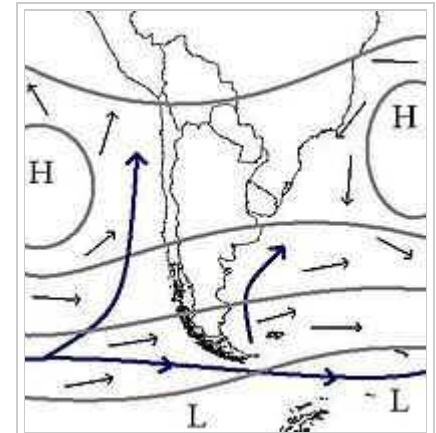


Climate of Chile

From Wikipedia, the free encyclopedia
(Redirected from Climate of chile)

The **climate of Chile** comprises a wide range of weather conditions across a large geographic scale, extending across 38 degrees in latitude, making generalisations difficult. According to the Köppen system, Chile within its borders hosts at least seven major climatic subtypes, ranging from desert in the north, to alpine tundra and glaciers in the east and southeast, humid subtropical in Easter Island, Oceanic in the south and mediterranean climate in central Chile. There are four seasons in most of the country: summer (December to February), autumn (March to May), winter (June to August), and spring (September to November).

On a synoptic scale the most important factors that controls the climate in Chile are the Pacific Anticyclone, the southern circumpolar low pressure area, the cold Humboldt current, the Chilean Coast Range and the Andes Mountains. Despite Chile's narrowness, some interior regions may experience wide temperature oscillations and cities such as San Pedro de Atacama, may even experience a continental climate. In the extreme northeast and southeast the border of Chile extends beyond the Andes into the Altiplano and the Patagonian plains, giving these regions climate patterns similar to those seen in Bolivia and Argentina respectively.



Prevailing winds, sea currents and stationary cyclones near Chile



Contents

- 1 Regions
 - 1.1 Andes
 - 1.2 Subtropical
 - 1.3 Dry arid
 - 1.4 Mediterranean
 - 1.5 Temperate oceanic
 - 1.6 Subpolar oceanic
- 2 Climate charts for different locations of Chile
- 3 See also
- 4 Sources
- 5 References

Regions

“ It [Chile] has four months of winter, no more, and in them, except when there is a quarter moon, when it ”

rains one or two days,
all the other days have
such beautiful suns...

The different climates of Chile are
reflected on this vegetation map.

—Pedro de Valdivia to Charles V, Holy
Roman Emperor

Climate	Ecoregion	Natural region
Desert (BWh, BWk)	Atacama desert	Norte Grande
Semi-arid (BWk, BSk, Csa)	Atacama desert, Chilean matorral	Norte Chico
Mediterranean (Csa, Csb)	Chilean matorral	Central Chile
Humid subtropical (Cfa)	Easter Island, Fernandezian Region	-
Temperate oceanic (Cfb)	Valdivian temperate rainforests	Zona Sur, Zona Austral
Subpolar oceanic (Cfc)	Magellanic subpolar forests	Zona Austral
Semi-arid (BSk)	Patagonian Desert	Zona Austral
Alpine	Andes, Central Andean dry puna	all natural regions of Chile
Tundra (ET)	Andes, Central Andean dry puna	all natural regions of Chile
Ice cap (EF)	Northern Patagonian Ice Field, Southern Patagonian Ice Field	Zona Austral

Andes

There is no proper Andean climate, but instead a huge variety of different micro climates. The relief of the Andes allows a variety of different climatic zones to develop within relatively short distances. The different climates in the Andes often combine aspects of adjacent climate zones forming transition zones. In glaciology, Andes mountains can be divided in two climatic subregions; the Dry Andes and the Wet Andes.

Subtropical

The climate of Easter Island is subtropical maritime. The lowest temperatures are registered in July and August (18°C - 64°F) and the highest in February (maximum temperature 28°C ^[1]), the summer season in the southern hemisphere. Winters are relatively mild. The rainiest month is April, though the island experiences year-round rainfall.^[2] As an isolated island Easter Island is constantly exposed to winds which help to keep the temperature fairly cool. Precipitation averages 1,118 mm per year. Occasionally, heavy rainfall and rainstorms strike the island. These occur mostly in the winter months (June–August). Since it is close to the Pacific High and outside the range of the ITCZ, cyclones and hurricanes do not occur around Easter island.^[3]



View toward the interior of Easter Island

Dry arid

See also: Atacama Desert

The Atacama Desert is the driest place on Earth, and is virtually sterile because it is blocked from moisture on both sides by the Andes mountains and by the Chilean Coast Range. The cold Humboldt Current and the Pacific Anticyclone are essential to keep the dry climate of Atacama Desert. The average rainfall in the Chilean region of Antofagasta is just 1 mm per year. Some weather stations in the Atacama have never received rain. Evidence suggests that the Atacama may not have had any significant rainfall from 1570 to 1971.^[4] It is so arid that mountains that reach as high as 6,885 metres (22,590 feet) are completely free of glaciers and, in the southern part from 25°S to 27°S, may have been glacier-free throughout the Quaternary — though permafrost extends down to an altitude of 4,400 metres and is continuous above 5,600 metres. Studies by a group of British scientists have suggested that some river beds have been dry for 120,000 years.

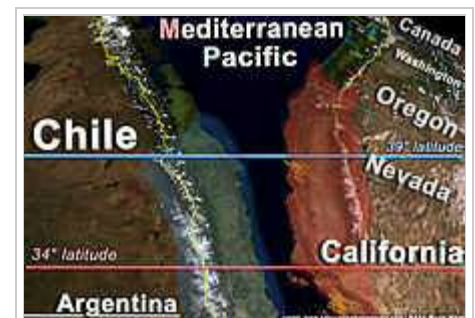


Pan de Azúcar National Park in Atacama Desert

Some locations in the Atacama do receive a marine fog known locally as the *Camanchaca*, providing sufficient moisture for hypolithic algae, lichens and even some cacti. But in the region that is in the "fog shadow" of the high coastal crest-line, which averages 3,000 m height for about 100 km south of Antofagasta, the soil has been compared to that of Mars.

Mediterranean

The climate of Central Chile is of temperate Mediterranean type, with the amount of rainfall increasing considerably and progressively from north to south. In the Santiago area, the average monthly temperatures are about 19.5 °C in the summer months of January and February and 7.5 °C in the winter months of June and July. The average monthly precipitation is no more than a trace in January and February and 69.7 millimeters in June and July. By contrast, in Concepción the average monthly temperatures are somewhat lower in the summer at 17.6 °C but higher in the winter at 9.3 °C, and the amount of rain is much greater. In the summer, Concepción receives an average of twenty millimeters of rain per month; in June and July, the city is pounded by an average of 253 millimeters per month. The numerous rivers greatly increase their flow as a result of the winter rains and the spring melting of the Andean snows, and they contract considerably in the summer. The combination of abundant snow in the Andes and relatively moderate winter temperatures creates excellent conditions for Alpine skiing. Areas around the Bío-Bío River, historically called La Frontera corresponds to southern limit of the mediterranean climate, with typical mediterranean fruits such as avocado, citrus, olives and grapes being cultivated north of it and oat, wheat, apples and potatoes to the south. This more or less drastic transition is caused by the split of the westerlies at these latitudes (~37° S) into one branch going to the southeast and another to the northeast, to this it is necessary to add the north-south lowering of the Chilean Coast Range which reduced the rain shadow effect.^[5]



Mediterranean climate distribution in the Americas. Note that the map of Chile is turned upsidedown

Temperate oceanic

See also: Climate of Valdivia

In Zona Sur and the northern part of Zona Austral the climate is Temperate oceanic. Here the Andean Cordillera intercepts moist westerly winds along the Pacific coast during winter and summer months; these winds cool as they ascend the mountains, creating heavy rainfall on the mountains' west-facing slopes. The northward-flowing oceanic Humboldt Current creates humid and foggy conditions near the coast. The tree line is at about 2,400 m in the northern part of the ecoregion (35° S), and descends to 1,000 m in the south of the Valdivian region. In the summer average temperature can climb to 16.5°C (62°F), while during winter the temperature can drop below 7°C (45°F).^[6]

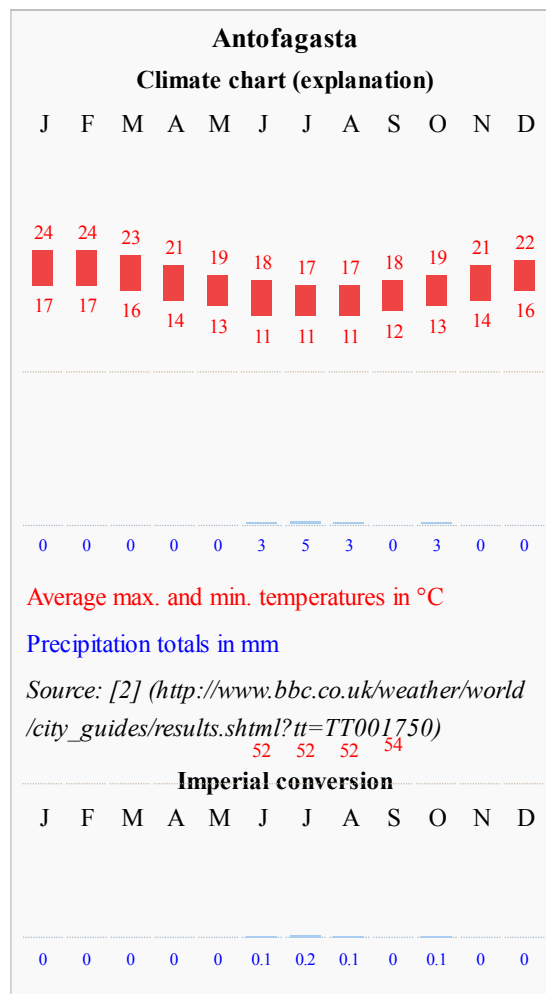
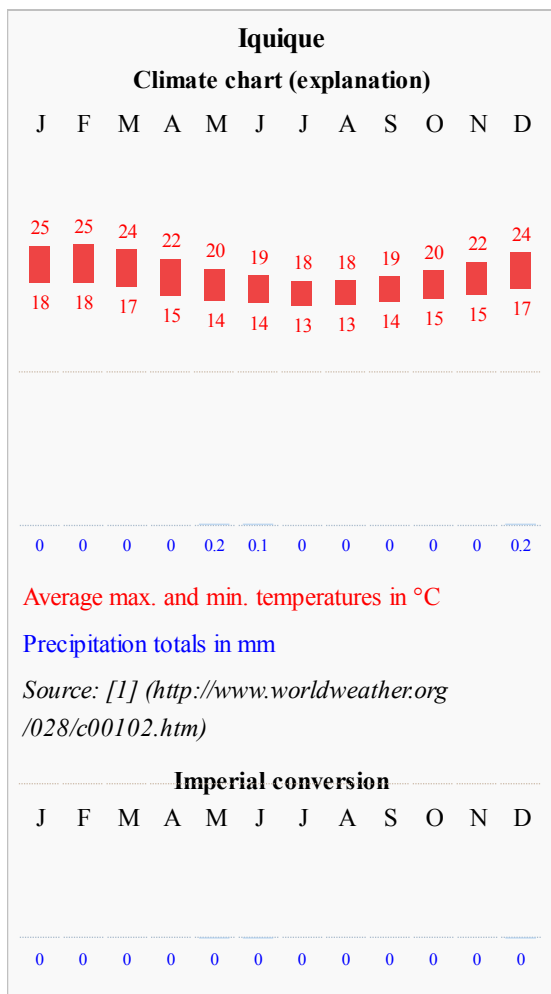


Maritime influence makes some southern Andean valleys prone to snowfalls in winter such as in Curarrehue in the picture.

Subpolar oceanic

The seasonal temperature in Zona Austral is greatly moderated by its proximity to the ocean and is known for stable constant temperatures, only small variability with season. The heaviest rainfalls goes between April and May and snow season goes all through Chilean winter (June till September), although the average temperature does not descend below 1°C in coastal areas.^[7]

Climate charts for different locations of Chile

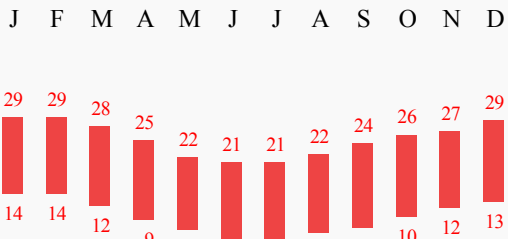


Average max. and min. temperatures in °F
 Precipitation totals in inches

Average max. and min. temperatures in °F
 Precipitation totals in inches

Copiapó

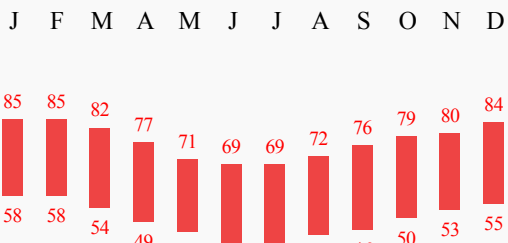
Climate chart (explanation)



Average max. and min. temperatures in °C
 Precipitation totals in mm

Source: [3] (<http://www.weatherbase.com/weather/weather.php3?s=007458&refer=>) [4] (<http://www.worldclimate.com/cgi-bin/data.pl?ref=S27W070+2100+85470W>)

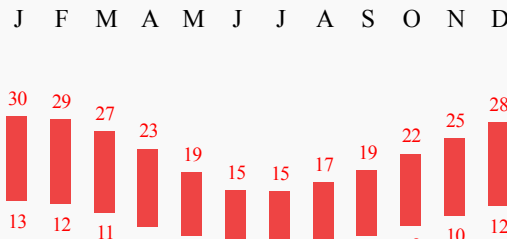
Imperial conversion



Average max. and min. temperatures in °F
 Precipitation totals in inches

Santiago

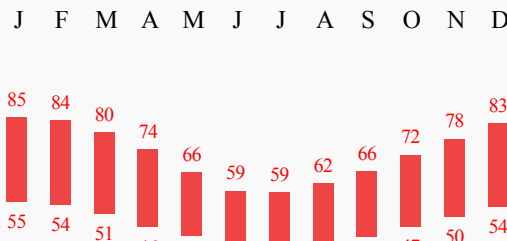
Climate chart (explanation)



Average max. and min. temperatures in °C
 Precipitation totals in mm

Source: WMO (<http://www.worldweather.org/028/c00103.htm>)

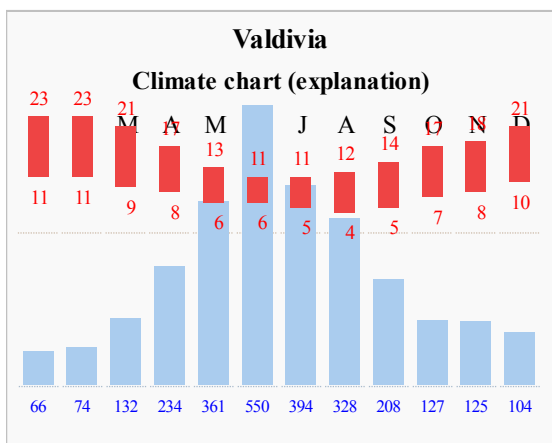
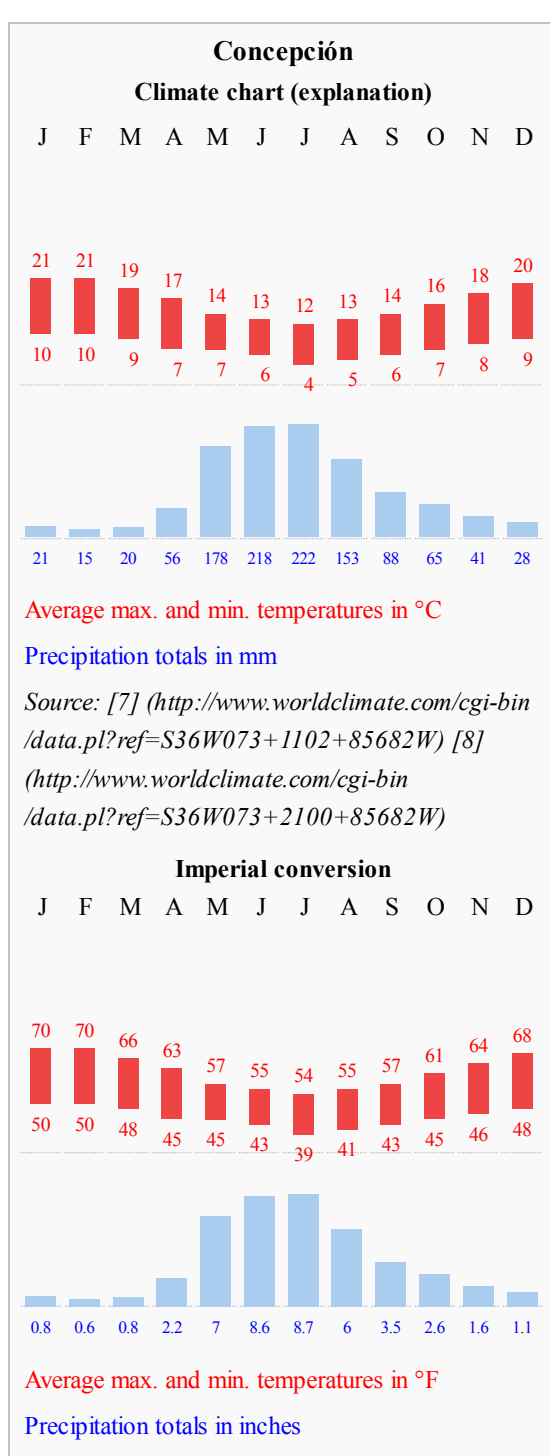
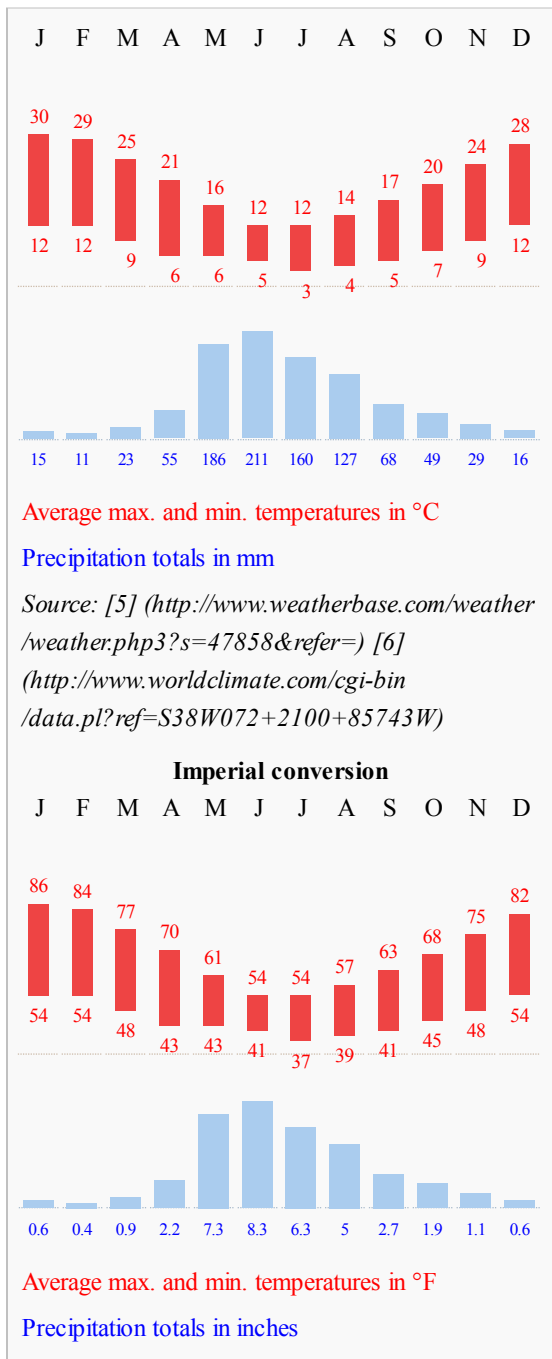
Imperial conversion



Average max. and min. temperatures in °F
 Precipitation totals in inches

Linares

Climate chart (explanation)



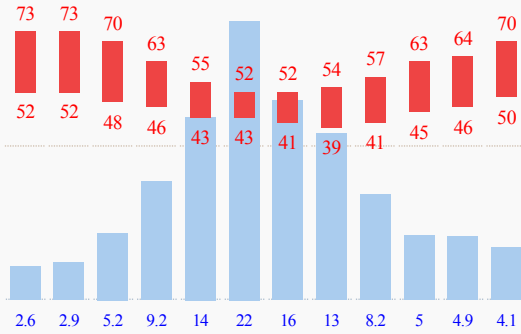
Average max. and min. temperatures in °C

Precipitation totals in mm

Source: [9] (http://www.bbc.co.uk/weather/world/city_guides/results.shtml?tt=TT001780)

Imperial conversion

J F M A M J J A S O N D



Average max. and min. temperatures in °F

Precipitation totals in inches

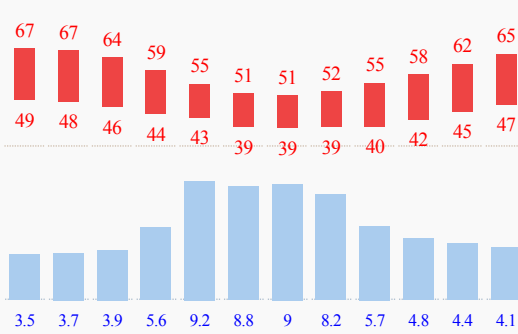
Average max. and min. temperatures in °C

Precipitation totals in mm

Source: [10] (<http://www.worldweather.org/028/c00104.htm>)

Imperial conversion

J F M A M J J A S O N D



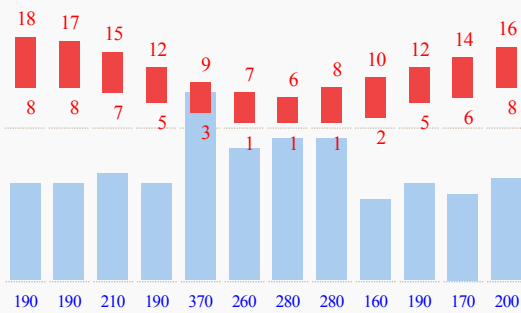
Average max. and min. temperatures in °F

Precipitation totals in inches

Aisén

Climate chart (explanation)

J F M A M J J A S O N D



Average max. and min. temperatures in °C

Precipitation totals in mm

Source: [11] (<http://www.weatherbase.com/weather/weather.php3?s=47858&refer=>)

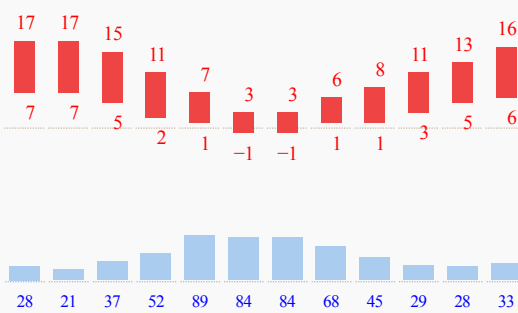
Imperial conversion

J F M A M J J A S O N D

Balmaceda

Climate chart (explanation)

J F M A M J J A S O N D



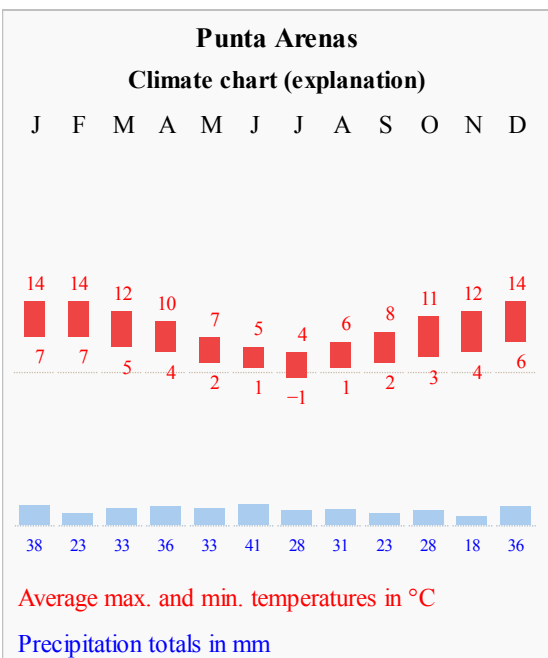
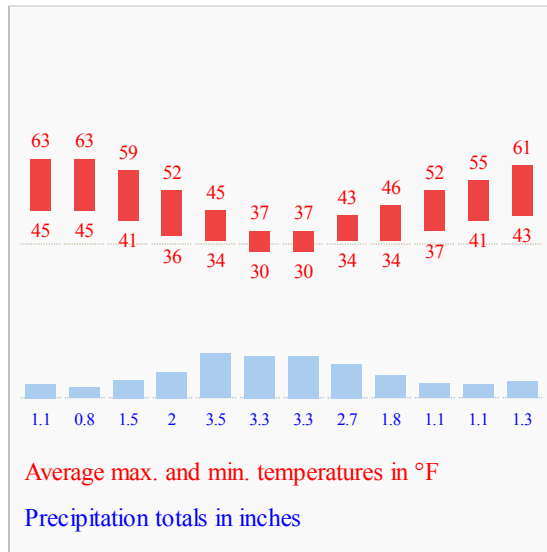
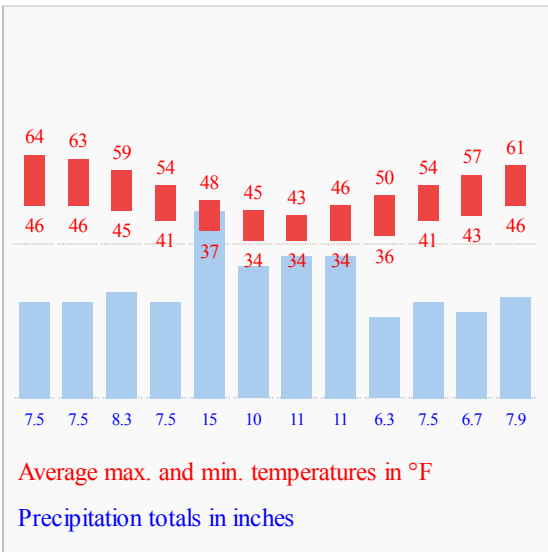
Average max. and min. temperatures in °C

Precipitation totals in mm

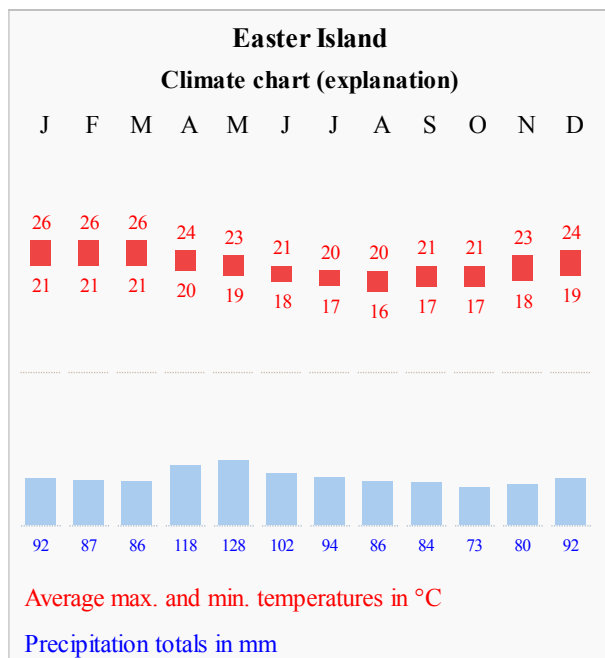
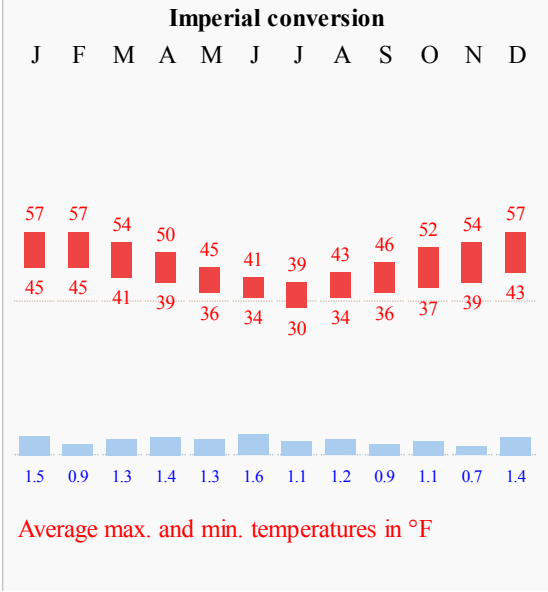
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Imperial conversion

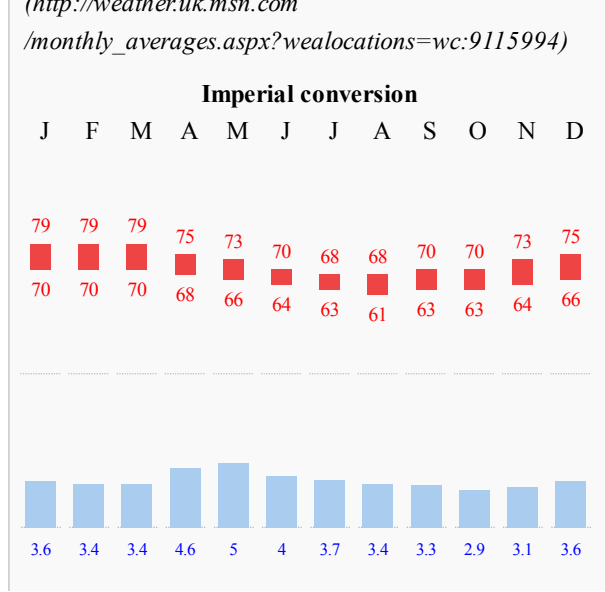
J F M A M J J A S O N D



Source: [13] (http://www.bbc.co.uk/weather/world/city_guides/results.shtml?tt=TT001760)



Source: [14] (<http://www.worldclimate.com/cgi-bin/data.pl?ref=S27W109+2100+85469W>) [15] (http://weather.uk.msn.com/monthly_averages.aspx?wealocations=wc:9115994)



Precipitation totals in inches

Average max. and min. temperatures in °F

Precipitation totals in inches

See also

- Agriculture in Chile
- Geography of Chile
- Geology of Chile
- Glaciers of Chile
- Natural regions of Chile
- White Earthquake

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Categories: Climate of Chile

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