TECHLINE
Durability

Effect of Climate on Durability of Wood

Climate has an important bearing on the relative rate of wood decay and thus the expected service life of wood exposed to the weather. Researchers at the Forest Products Laboratory have devised a climate index map to predict relative decay hazard regions in the United States.

The map is based on mean monthly temperature and number of rainy days. The most severe location in the United States is the Southeast, where rainfall is high and weather is warm and humid. In the Northeast and Midwest, decay advances at a somewhat slower rate. In the Northwest, the decay hazard is moderate near the coast but it can be severe on the coast. Decay is less hazardous in most of the Southwest because this region is very dry.

In mountainous regions, localized areas with marked differences in temperature and rainfall occur. Index differences due to this factor are not reflected in the map. Where climate is relatively uniform over wide areas, the map can be used with confidence.

The climate index map primarily estimates the decay hazard of wood exposed above ground to weather. With certain restrictions, the map can also be used to determine the hazard for wood in contact with the ground. Any place where wood contacts the soil should be considered a high decay hazard, indicating pressure treatment of wood with a preservative.

Homeowners, architects, builders, and marina operators can use this map for help in selecting the wood species or preservative treatment that will ensure maximum service life of wooden structures.

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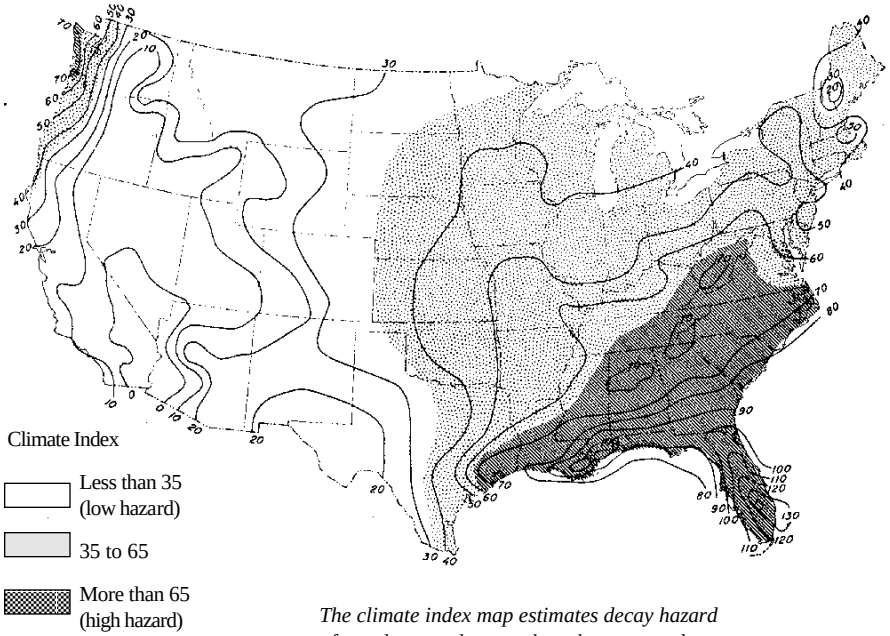
Reference

Scheffer, T.C. 1972. A climate index for estimating potential decay in wood structures above ground. Forest Prod. J. 21(10): 25–31.



The climate index map estimates decay hazard of wood exposed to weather above ground.

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