

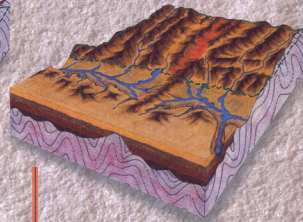
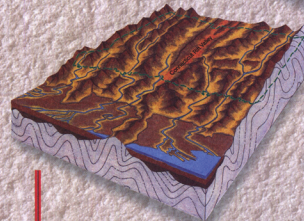
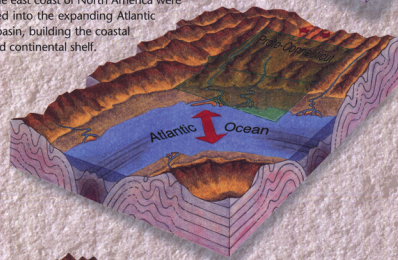
300,000,000 – 160,000,000 years ago

By 300 million years ago plates of continental crust, including the ancient continents of Africa, Avalonia, and North America, had converged to form the supercontinent "Pangaea." These continental collisions created a long mountain chain that included the Appalachians and stretched across "Pangaea" from south-central North America to south-western Eurasia. Later (200-160 million years ago), as Africa broke away from North America, the Atlantic Ocean was born. The Appalachian Mountains and Avalonia were left attached to North America and formed part of the western margin of the new ocean basin.



160,000,000 – 30,000,000 years ago

Sediments eroded from the high mountains along the east coast of North America were deposited into the expanding Atlantic Ocean basin, building the coastal plain and continental shelf.



160,000,000 – 30,000,000 years ago

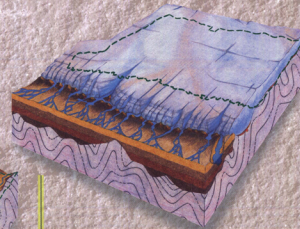
In our area, the same geologic process was at work. Sediments from the eroding bedrock of the coastal highlands were delivered to the ocean by streams. As these coastal-plain sediments accumulated, they became the foundation for what is now Long Island. The dashed green line shows Connecticut's present land surface.

30,000,000 – 26,000 years ago

Periods of lowered sea level, gentle uplift of the land, stream erosion and early glaciations combined to continue bedrock erosion and to remove coastal-plain sediments, creating an interior lowland just south of Connecticut.

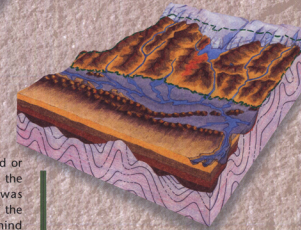
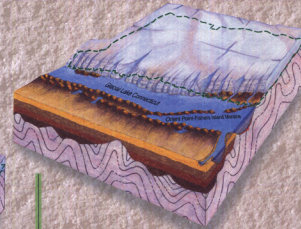
26,000 – 21,500 years ago

The last (late Wisconsinan age) glacier entered Connecticut and advanced southward to the middle of what is now Long Island. During this glacial advance, Connecticut's bedrock and the coastal-plain lowland were further smoothed and modified by the moving ice. A terminal moraine of assorted glacial debris accumulated along the front of the ice.



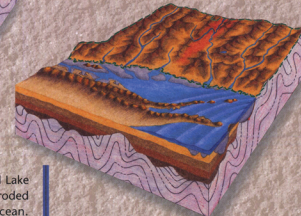
21,500 – 17,500 years ago

As the glacier melted, it periodically slowed or stopped its retreat. During one such pause, the Orient Point-Fishers Island moraine was deposited as a dam across the east end of the lowland. Glacial meltwater collected behind the moraine, and freshwater Glacial Lake Connecticut formed. A similar lake occupied Block Island Sound. Sea level was 300 feet lower than it is today.



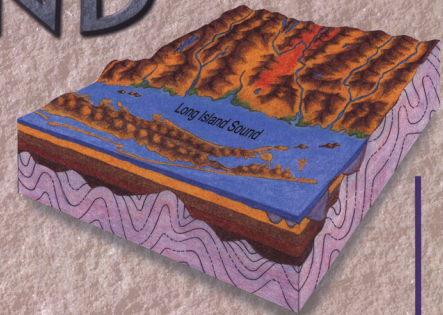
17,500 – 15,500 years ago

The glacier continued to melt, and Glacial Lake Connecticut drained away through the eroded moraines to the still lowered Atlantic Ocean. Thick, glacial lake-clay deposits were exposed in the lowland by the time Connecticut was nearly ice free.



15,500 – 5,000 years ago

Glacial melting was accompanied by a rise in sea level. The drained lakebed was not exposed for long (possibly 500 years) before rising ocean waters entered the lowland from the east and the "Long Island Sound" estuary began to evolve.



5,000 years ago – Present

As the rate of sea-level rise slowed, tidal marshes developed, and Long Island Sound assumed its present shape.



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Design: Erik McPherson & Susan Lawrence

160,000,000 30,000,000 26,000 21,500 17,500 15,500 5,000 to Present