EFFECTS OF POPULATION EXPANSION AND PHYSICAL FORCES ON THE WESTERN CONNECTICUT SHORELINE

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Reconnaissance studies of a portion of the Southwestern Connecticut shoreline has shown that submergence continues. In spite of the shoreline stabilization following the great ice age, submergence continues at an accelerated pace.

Inspection of aerial photographs taken throughout 50 years shows definite sea level increases over the land at rates exceeding those of our earlier estimates. From 1833 to 1933 sea level rose relative to the southwestern Connecticut shoreline one foot, give or take variation from place to place along the shoreline. Subsequent changes are as high as 10 inches (in places) from 1933 to 1980. These observations are in keeping with the Connecticut's Coastal Area Management which reported that a shoreline recession is occurring from 1 to 3½ feet per year depending on location. This marine emergence melds with tidal erosion, and tidal wetlands losses which normally operate as a tide-buffer.

Isolated rock island markers are used to document these findings. In Holly Pond, two small protected rock islands have completely submerged within the past 15 years. A number of otherwise unaltered beaches have narrowed considerably in the same period of time. Marshes and other indicators of tidal stage have also been drowned, but the exact vertical submergence of these go unmeasured.

Accelerated submergence rates (since 1933) have been countered in local beaches by restoration efforts by private and town agencies. Restoration must be an ongoing effort.