In the south half of section 32, Garfield, and in a belt which thence extends approximately north and south, the surface of the delta, as it was originally deposited, falls toward the west with a slope of 25 or 30 feet in a mile, from 1,125 or 1,130 feet to about 1,100 feet above the sea. Beneath the original surface, however, channels have been eroded by the winds, and sand hills 25 to 75 feet above it have been blown up in irregular groups and series, scattered over a tract about a mile wide and extending three or four miles southward from the Sand Hill River, in section 29, the northeast part of section 30, and in section 31 and 32, Garfield, and reaching southward in sections 5 and 8, Sundal. An isolated group of these hills lies north of the Sand Hill River, in the northwest quarter of section 16, Garfield. These sand dunes are in part bare, being so frequently drifted by the winds as to allow no foothold for vegetation; other portions are clothed with grass or with bushes and scanty dwarfed trees, including bur oak, the common aspen or poplar, cottonwood, green ash, black cherry, and the frost grape.

The upper Herman beach, the first of the series which was formed in the vicinity of Maple Lake contemporaneously with the single Herman beach farther south, runs approximately from south to north, through or near the northeast corner of section 4, Garfield. It is a smooth gravel ridge, with its crest 1,165 to 1,175 feet above the sea. The second Herman beach, in the east part of section 5, this township, and section 32, Godfrey, about a mile west of the upper beach, has a height of 1,149 to 1,153 feet, being a ridge of gravel and sand about forty rods wide, with very gentle, prolonged slopes toward both the east and west. A half or two thirds of a mile farther west, the third Herman beach, passing through the northwest quarter of section 5, Garfield, and the west part of section 32, Godfrey, has a height of 1,130 to 1,135 feet, forming a distinct ridge in its southern part, but farther north being a flat area of gravel and sand, slightly elevated above the land next east.

The Herman beaches are very finely developed for a distance of six to eight miles northward, passing through Godfrey Township into the southeast part of Tilden, where they curve to the northeast and east. From this great bend of their course, these beaches pass eastward by the northeast end of Maple Lake and by Mentor and Erskine. The highest Herman beach is traced onward northeast and east to Trail and Gully railway stations; and it continues through Clearwater and Beltrami counties, passing close south of Red Lake.

Maple Lake, the largest of the many lakes in the southeast part of Polk County, is 1,169 feet above the sea. In its curving course west and north of this lake the highest beach of Lake Agassiz is magnificently exhibited, forming a massive, gently rounded ridge of gravel and sand, about thirty rods across, with the crest of its highest portion, along a distance of two or three miles, at 1,178 to 1,186 feet.

On the Fosston line of the Great Northern railway and on the same latitude with the eastwardly curving beaches north of Maple Lake, three small beach ridges are crossed about two and a half miles east of Benoit, the elevation of their crests being successively 1,062, 1,069, and again 1,069 feet, in their order from west to east. These probably represent the upper Tintah beach. One and a quarter miles farther east a more massive beach is crossed, with its crest at 1,092 feet, which is probably the lowest Norcross shore line. Other beach ridges crossed nearly one mile and a half and again nearly two miles east of the last, with crests respectively at 1,114 and 1,120 feet, are apparently referable to upper Norcross stages of the lake. The next beach noted on this railway, three quarters of a mile farther east, at the height of 1,142 feet, belongs to the lower portion of the Herman series.

In section 34, Liberty, close south of the Sand Hill River, the Campbell shore is marked by a low eroded escarpment of the glacial drift or till, the top of which is 1,010 feet above the sea, being probably 10 feet