

mestic, sanitary, and manufacturing purposes these have been tapped at 2,170 places. The estimated consumption for manufacturing purposes is 3 per cent of the total amount of the water used. There are 131 fire plugs.

In recent years, and particularly within the last 8 or 10 years, a large number of deep wells have been drilled within the county limits, and especially within the limits of the city of Wilmington. Detailed information concerning a considerable number of these wells is included in the table of well data given below. The artesian supplies are derived from the more porous sandy strata of the Peedee formation, and along the coast from sand layers within the Eocene limestones. The artesian waters may be divided into two major classes: first, those that are highly mineralized and that are so salty as to be nonpotable and undesirable for ordinary purposes, and, second, those whose mineral content is sufficiently low to permit of their use for domestic and manufacturing purposes. The reader is referred to the sections (pp. 438, 439) where the approximate line of separation between these two classes of waters is indicated by dotted lines.

All horizons occurring beneath the dotted lines furnish water of a highly saline character, and cannot be regarded as satisfactory sources of artesian supply. In the deep well of the Clarendon Waterworks Company at Hilton Park, Wilmington, water with a salty taste, which flowed at the surface, was first encountered at a depth of 379 feet, and at a number of other horizons beneath this, almost to bedrock, salty flows were obtained. (See account of this well by J. A. Holmes, *Science*, new ser., vol. 2, 1900, pp. 128-130, and *Journal Elisha Mitchell Sci. Soc.*, July-Dec., 1899, pp. 67-70. Also, see table of well data below. See Plate XLII, A, opposite p. 480.) At Castle Hayne, in a well drilled by the Carolina Trucking Development Company, nonflowing, salty waters were encountered in the Peedee formation from 270 to 338 feet and similar flowing, salty waters from 338 to 370 feet below the surface. At Fort Caswell, Brunswick County, which is but a few miles from the southern extremity of New Hanover County, salty water was encountered at 365 feet, and none but highly saline waters were obtained below this depth to bedrock at 1,540 feet. (See Brunswick County, page 372.)

Above the dotted lines in the sections referred to, the waters are in most places potable. They are usually slightly hard and in some cases are rather high in mineral content.

At Wilmington the principal water horizon is in the Peedee formation at depths of between 30 and 75 feet below *sea level*. The water comes from soft sand layers which alternate with layers of calcareous sandstone. The water rises but a few feet above sea level, and force