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TIDE LEVELS AND DATUM PLANES IN EASTERN CANADA.

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In connection with the Survey of tides and currents which has now been under the direction of the writer for eight years, or ever since its initial or tentative stage, a quantity of information has accumulated regarding tidal levels, and a number of bench-marks have been established. Most of this information has been published from time to time, in the annual Reports of Progress of this Survey; but it will be of advantage to collate in a condensed form the results obtained, as these now include good determinations of mean sea level, low-water datum planes, and other levels of permanent value.

This Tidal Survey, as a branch of the Department of Marine, has for its primary object the determination of the time-relations of the tide, and the turn of tidal currents, for the information of mariners. The determination of levels is thus quite collateral to the object which the Department has in view, but it is necessary within certain limits; because, at the principal tidal stations, it is essential to have a bench-mark in order to maintain a uniform datum level for the