

Section 2.—Standard Time and Time Zones

Standard time which was adopted at a World Conference held at Washington, D.C. in 1884, sets the number of time zones in the world at 24, each zone extending over one twenty-fourth of the surface of the earth and including all the territory between two meridians 15° longitude apart. Standard time is Greenwich time, all other time zones being a definite number of hours either in advance of or behind Greenwich.

Canada has seven time zones, the most easterly being Newfoundland standard time, three hours and thirty minutes behind Greenwich mean time. In the west, Pacific standard time, used throughout British Columbia and part of the Northwest Territories, is eight hours behind Greenwich, and Yukon standard time, used throughout the Yukon Territory, is nine hours behind Greenwich. Some municipalities adopt the time used by the local railways which, in certain cases, differs from the standard. There are also villages that adopt such time as seems best to suit their convenience but in general the legal boundaries of the different time zones are actually in use.

Daylight Saving Time.—For some years before World War I there was active propaganda, particularly in the cities, for the use during the summer months, of an earlier time usually referred to as 'daylight saving time', one hour ahead of standard time. It was considered from the economic as well as from the health point of view that people in industrial towns and cities would gain by having longer periods of sunlight at their disposal for recreation. Canada adopted daylight saving time in 1918 but the Canadian Act lapsed at the end of that year. Since that date however various towns and cities have adopted daylight saving bylaws for varying periods in the summer months.

Legal Authority for the Time Zones.—Most of the regulations made in Canada concerning standard time have been passed by the provincial legislatures and the Northwest Territories Council. The exceptions include: the Daylight Saving Act of 1918; an Order in Council (P.C. 4994) issued in 1940 requiring the continuation, for an additional period, of daylight saving time in a number of places in Ontario and Quebec where it had already been in force for the summer; and an Order in Council in 1942 (P.C. 547) making daylight saving time nationwide—later revoked by Order in Council (P.C. 6102), ending the observance on Sept. 30, 1945. Legislation, besides determining the boundaries of zones, regulates such matters as the times of coming into effect or expiration of Acts, ordinances, contracts and agreements, times of opening and closing registration offices, law courts, post offices and other public offices, times of open or close seasons for game, and times of opening and closing business houses and places of amusement.

PART IV.—GEOPHYSICS AND ASTRONOMY

The research activities carried on in Canada in the fields of geophysics and astronomy together with the modern application of such studies is dealt with in the two special articles that follow.

GEOPHYSICS IN CANADA*

Man's relation to the earth is such an intimate one that throughout the centuries he has studied it intensely for many different purposes. In ancient times his purposes were mainly connected with travelling, surveying, mining and navigating, and from such investigations have descended the modern studies of geography, geodesy, geology and geophysics, respectively.

Geophysics began with the observations made by early navigators of the weather, ocean tides and the lodestone. These studies gradually developed into modern meteorology, physical oceanography and terrestrial magnetism. Besides being of interest to

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