

Medical Advice to Ships at Sea.—Ships at sea may obtain medical advice through any of the Department's coast stations. Messages from ships in this connection are forwarded to the nearest medical officer of the Department of National Health and Welfare and his reply is transmitted to the ship.

Radio Assistance rendered to Vessels in Emergency.—Federal Government radio stations rendered assistance to 109 ships and aircraft reported in danger or distress during the year ended Mar. 31, 1949.

Marine Casualty Reporting Stations.—To assist in promoting the safety of life at sea, seven marine casualty reporting stations on the Atlantic coast and ten on the Pacific coast, are fitted with radiotelephony.

Radiocommunication Stations and Aids to Air Navigation

Radio aids to air navigation are provided from coast to coast along the airways used by the many Canadian airlines, United States airlines flying over Canadian territory, and many Canadian and United States military aircraft. In order to construct and maintain these many facilities, trained engineers and technicians are located at six district offices: Moncton, Montreal, Toronto, Winnipeg, Edmonton and Vancouver.

Radio Ranges.—The principal aid to air navigation is the radio range. These stations are located approximately 100 miles apart and provide radio beams which guide aircraft in flight. In addition to being kept on course, pilots can be informed by radio telephone from the ground station of weather conditions and other matters of interest to the pilot. There are now 92 such stations in operation from Vancouver Island to Newfoundland.

During the year ended Mar. 31, 1949, two new radio ranges were built and commissioned at Sandspit, B.C. and Graham, Ont., and the operation of one at Mecatina, Que., was taken over by the Department of Transport. The ranges at Patricia Bay, Sandspit and Pennfield Ridge were converted to simultaneous operation, making a total of 52 so equipped. This feature enables voice communication between the ground station and the pilot without shutting off the beams. The Cranbrook Radio Range was closed down at midnight on Mar. 31 as it was considered that the Kimberley Range nearby would serve the airway adequately.

Fan Markers.—Fan-marker equipment is installed at various points along the airway to identify to pilots a particular spot on the ground. For instance, the Maple Ridge fan marker, 30 miles east of the Vancouver airport, informs the pilot on a west-bound flight when he may safely lose altitude without risk of striking mountain tops. The only additional facility of this type undertaken was preparatory construction work for an installation at Campbell Cross, Ont.

Station Location Markers.—Each radio range station is provided with a station location marker. The purpose of this equipment is to inform a pilot flying overhead when he is directly above the station. This is accomplished by directing energy vertically from the ground in the form of an inverted cone that is received in the aircraft and causes a light on the instrument panel to be turned on. The following range stations had this equipment added during the year: Nakina, Ont., Earleton Junction, Ont., Muskoka, Ont., Porquis Junction, Ont., Pagwa, Ont., Rivers, Man., Swift Current, Sask., Broadview, Sask., Penhold, Alta., Medicine Hat, Alta., Sandspit, B.C., Kimberley, B.C., and Yellowknife, N.W.T.: this brings the total up to 90. Only two ranges have yet to be equipped, those at Killaloe, Ont., and at Mecatina, Que.