

REGIMES OF UNDERGROUND WATERS IN EASTERN SECTOR OF ARCTIC AND SUBARCTIC

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By hydrographic data we distinguish circum-arctic and circum-pacific regimes of the underground waters (UW) in the eastern sector. We consider the regime as conditions of UW existence. Features of circum-arctic type: poor contrast of climatic parameter in latitude and longitude; spreading of permafrost rocks (PR); long (7 and more months) period of decrease of the underground waters resources without replace the loss, and as a result of this processing - an intrusion of sea waters into the land trough the subbed taliks within the lowlands; presence of lenses of UW with negative temperatures and with mineralization up to 190 g/l; in all places salinity of the UW, contacted with the PR base; presence of local UW accumulations, the levels of which are established lower than the calculated normal hydrostatic ones. This type of UW regime is characteristic for Arctic and Subarctic from the viewpoint of location. Features of circum-pacific type: sharp change of climatic parameters in latitude and longitude; presence of PR strata of continuous, discontinuous and island spreading; reduction of period of decrease of UW resources up to 5-6 months a year with an existence of underground waters in season melting layer up to January-February: position of fresh UW levels constantly above the sea level; spreading at all places of UW with mineralization less than 1 g/l and deeper PR strata base; variability of centers of UW supply and relief. All mentioned and other features are related to different heat-moisture content of the air masses that intrude into the land from the Pacific and Arctic Oceans, and to geological and tectonic differences. Within the Arctic ocean drainage basin the modern tectonic regime is more passive that within the Pacific ocean drainage basin. Cyclone air masses in eastern sector of Arctic are cold and dry. Warm and wet cyclones saturated by moisture intrude into the land from the Pacific ocean.