Caribou-Poker Creeks Watershed: Taiga Domain Car_AK_TAIG AK CRP

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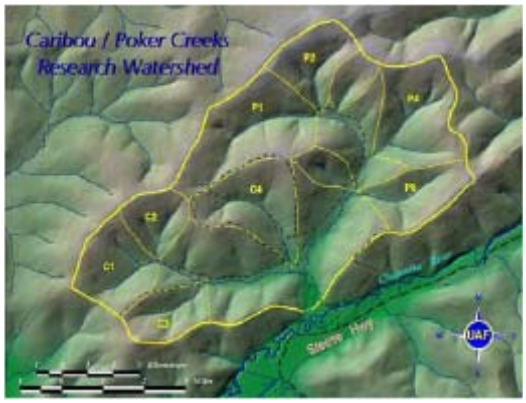
Location within Domain: 65.15oN, 1147.47W



History: The Caribou-Poker Creeks Research Watershed (CPCRW) was established in 1969 for long-term studies of complete catchments in permafrost dominated uplands. Initial research focused on watershed hydrology and climate. In 1999 an experimental burn was conducted to test the effects of fire on vegetation succession, soil processes, stream flow and chemistry and permafrost dynamics. In 2004 a natural wildfire burned within the eastern half of the watershed. (see http://www.lter.uaf.edu/cpcrw/default.cfm)

Key Characteristics: CPCRW is a unique watershed within the US because it is in the zone of discontinuous permafrost. It is fairly representative of upland headwater basins in subarctic Alaska. Permafrost is discontinuously distributed within CPCRW. The permafrost mosaic of the taiga forest uplands exerts a powerful influence over hydrological patterns within the watershed. Streamflow is a mixture of highly variable shallow subsurface storm runoff events from permafrost-dominated areas and consistent groundwater base flows from permafrost free areas. Within CPCRW there are first order stream basins with a range of 4% to 55% of the catchments underlain by permafrost. The three primary watershed soils are part of the Entisol and Inceptisol soil orders which occur in 90% of the Taiga Domain. Climate of CPCRW is representative of the Domain. Average annual precipitation for the watershed is 340 mm with a mean annual temperature of -3° C.

Existing Infrastructure: The watershed has been part of stream monitoring work since its inception. A National Atmospheric Deposition Program station has been collecting information on precipitation chemistry since 1993. The watershed has been added to the BNZ LTER research program in 1993.

Facilities: On site facilities are limited to data collection activities. The close presence and cooperation with the University's Poker Flat Rocket Range (PFRR) will allow the installation of permanent facilities within 2 km of the watershed and provide safety during rocket launch events.