Highest Elevation Weather Station in Western Alaska

At any given latitude, weather conditions are significantly different at high elevation than near sea level, where the majority of western Alaska weather stations are located. Compounding this difference, future climate change is expected to be amplified at higher elevations. Thus, when attempting to understand changes taking place in alpine glaciers, there is a need for climatological data collected at high elevation.

As part of a study of glacier persistence, Togiak Refuge scientists, working with Northern Arizona University and Wood-Tikchik State Park, have recently established a weather station in the Ahklun Mountains. The data collected at this station will be used to relate the climatological conditions directly affecting glaciers with long-term data sets collected at low elevation stations.

The station is located near one of the largest surviving glaciers in the Ahklun Mountains. It measures air temperature, rainfall, radiation, relative humidity, and wind speed and direction on an hourly basis. Given the difficulty of accessing the site, the weather station is equipped with a satellite-linked data logger that automatically uploads data every six hours.

There are over 200 weather stations throughout Alaska. Of these, we are aware of only four sites with stations at higher elevation than the Ahklun Mountains station, which is located at approximately 2,800'. Thus, this is the highest elevation weather station in western Alaska, and is one of a handful of high elevation stations in the state.

Togiak Refuge crew and weather station at the Mount Waskey glacier in the Ahklun Mountains, southwest Alaska.

Arrow marks location of weather station.