Happy Valley, Alaska (Tundra)

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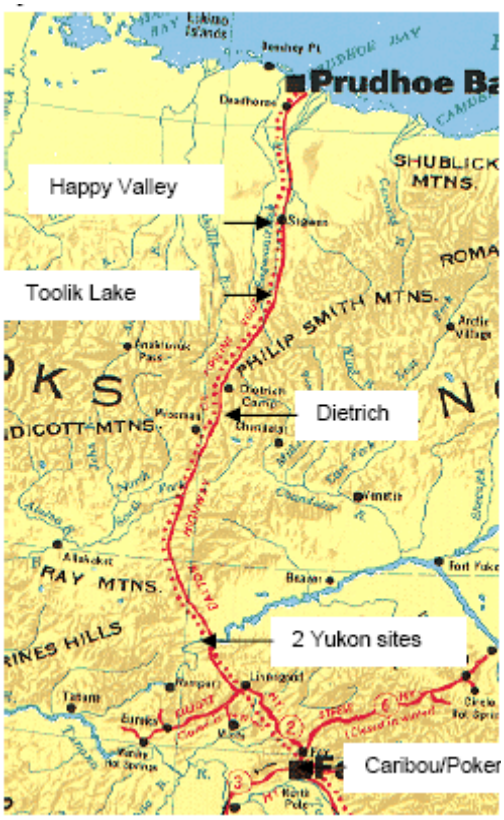
Location within Domain: Happy Valley is located 128 km south of Prudhoe Bay and 72 km north of Toolik Lake on the North Slope along the Dalton Highway. 69.15oN 148.83oW



History: Research at Happy Valley began in 1990 and continued for 4 years, much of it under the NSF program Arctic Flux. Voulitis et al. (1999) carried out CO_2 and energy fluxes. Ping et al. (1997) measured carbon storage over a time history. Other papers have been published on soil temperatures, depth of thaw, and vegetation.

Key characteristics: Happy Valley has well-developed moist tussock tundra but more shrubs than Toolik. The North Slope vegetation is becoming more shrubby and this site shows better development of this trait than does the tundra at Toolik Lake which lies some 300-400 m higher. The site is close to the Dalton Highway in rolling tundra-covered hills. Haugen and Brown (1980) report a mean July temperature of 11.3oC.

Existing infrastructure: One important infrastructure is the year-round road access. Another is the fiberoptic cable that runs along the pipeline within a kilometer of the site.

Facilities: There are no facilities. Toolik Field Station 72 km away is the nearest support facility.

References: Voulitis, G.I., W.C. Oechel. 1999**.** Eddy covariance measurements of CO_2 and energy fluxes of an Alaskan tussock tundra ecosystem Ecology, 80(2: 686–701 `3222Ping, C..L., G.J. Michaelson, and J.M. Kimble. 1997. Carbon storage along a latitudinal transect in Alaska. Nutrient cycling in agroecosystems. 49: 235-242.