

THE UNIVERSITY ALASKA SOUTHEAST'S (UAS) ANNUAL CARBON FOOTPRINT

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The annual carbon budget for the University of Alaska Southeast (UAS) Juneau campus is determined for the period during Fall 2006, Spring 2007, and Summer 2007 semesters during which time 32,012 credit hours were produced. Use by UAS faculty, staff and students of diesel fuel for heating (UAS Facilities data) and jet fuel for official university airplane travel (UA Banner system data) was estimated. The amount of gasoline used for daily commuter automobile and truck travel was determined for faculty and staff only using GIS to calculate the distances from individual residences to campus and then multiplying by an average mileage driven per week. The city of Juneau is powered by hydro-electricity, generated from a lake-tap system. Fossil fuel sources are primarily used for heat and transportation in the Capital City. About 45% of the diesel and gasoline used on the UAS Juneau campus is for heating and transportation. The remaining 55% of energy used is electricity generated by hydro power. The estimated total UAS carbon dioxide emissions from hydrocarbon use for this time period was 3,992,845 kgCO₂ (3,993 metric tonnes) with daily car and truck transportation at 4,200 kgCO₂ (9,273 lbs) for a total of 1,533,000 kgCO₂/year. Gasoline used for transportation comprises 38% of the total UAS carbon dioxide emitted. During this period 49% of the hydrocarbon use was for heating buildings. Airplane travel constituted 11% with diesel-powered University vehicles using the remaining 1%. This baseline data for UAS carbon emissions will serve as a starting point for future university consideration of reducing its energy to become more sustainable. During this time period 125 kgCO₂/UAS Juneau credit hour were used. A recently published study by the City and Borough of Juneau determined that 441,000,000 kgCO₂ (441,000 metric tonnes) had been used during 2007 (marine highway 16%, highway 25%, air transportation 10%, buildings 31%, Greens Creek Mine 14%, and equipment 4%). UAS is responsible for 0.55% of the total Juneau Carbon footprint.