Quantify the glacier mass change until 2100; the model was calibrated over the period 1955-2005 using daily precipitation and temperature data from the Scenarios Network for Alaska & Arctic Planning (SNAP) project based on the Community Climate System Model (CCSM). We use data from 3 emission scenarios (A1B, A2, and B1).

For the future scenarios a simple glacier retreat algorithm is implemented using volume-area scaling. The model has 9 model parameters (melt factor, radiation coefficient for snow and ice, temperature storage coefficients are assessed for each reservoir to account for differences in water travel times. The future scenarios a simple glacier retreat algorithm is implemented using volume-area scaling. The model has 9 model parameters (melt factor, radiation coefficient for snow and ice, temperature lapse rate, precipitation correction factor and lapse rate, storage coefficients for each reservoir).