

CARBON BALANCE OF THE ALASKAN BOREAL FOREST

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Determination of the carbon balance in a broad forest region like the Alaskan boreal forest requires the development of a number of important environmental (state factors) classes to allow for the development of carbon balance estimates. We have used the following factors to develop a regional classification of the state: (1) average monthly temperature May through September (Approximate growing season); (2) total precipitation May through September; and (3) the domain, division and province levels of the ecoregions classification of Alaska (see McNab and Avers 1994).

In addition the following classifications to further subdivide and describe the boreal forest regions of the state are being developed: (1) seasonal land cover classification is being developed by the USGS EROS field office in Anchorage; and (2) age structure of the vegetation in the forest areas.

A forest dynamics model (GAFED) for the Alaskan boreal forest will be run to determine the effects of anticipated global change on the carbon dynamics within the regions of the biogeoclimatic classification. This approach should result in an accurate representation of the carbon dynamics of the forest within an area of land the size of Alaska.

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