Long Term Monitoring of Vegetation on Elk Range in Rocky Mountain National Park[TWS]

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A study of the condition and trend of vegetation was initiated in 1968 on the elk winter range in Rocky Mountain National Park. To monitor changes 45 transects were established on the east slope low elevation winter range and 17 transects on the higher elevation winter and summer ranges, including 5 in the Colorado River Valley. These transects consisted of 21 Daubenmire plots (20X50 cm) distributed along a 100 ft line to measure canopy cover and frequency of primary plant species. Shrub intercept was measured along lines 100 or 200 ft in length. Most transects were measured at 5 year intervals with the last reading in 1996. On the shrub/grass and grassland plots the vegetation appears to have remained stable in composition and cover. Results on the meadow types were not definitive but may reflect responses to changes in water table levels. Declines were apparent on aspen and willow transects but individual transects vary greatly in response to use by elk and/ or habitat modification by beaver. On the alpine tundra transects the vegetation on upland sites appeared quite stable, but some declines are indicated for willow cover on Trail Ridge. Major declines in willow cover over the study period were noted on subalpine krummholz plots. Elk are probably a significant influence but weather conditions may also affect these sites. West side willow transects along the Colorado River bottom did not indicate any significant trends.