ECOSYSTEM ECOLOGY - ORIGINAL PAPER

Linking plant growth responses across topographic gradients in tall.1(CO6-332prairients)] TJET9.9624646 0 09624603 51.02324.5857223 TmJ

Flux and sensor measurements

Two eddy covariance towers were in operation on this watershed in 2008, positioned in upland and lowland locations, 340 m apart. The upland tower has operated continuously at this location since 1996 as part of an ongoing Long-Term Ecological Research project, while the lowland tower was deployed at this site from 2006 to 08. In 2009, only the upland tower was present. Net carbon

the lowland position and the least in the upland and break positions (Fig. 1). Total biomass largely reflected grass biomass (vegetative and flowering culms) with minor contributions from forbs, which did not vary by topographic position ($p = 0.68$) (Fig. 1). The 2-position topo-

(4Fig.

the range of measured biomass values during 2008–2009 (242–1,027 g m^{-2}

watershed biomass (Table 3; Fig. 7). Thus, our model estimates indicate that nearly two-thirds of the total accu-

but daily NEE is highly variable (± 25 g CO_2 m^{-2} day^{-1})

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