

Using GPS to Track Livestock on the Landscape

Pat Clark

USDA Agricultural Research Service, Northwest Watershed Research Center, Boise, Idaho

Evolving GPS-based, animal tracking technologies have now made it possible to make season-long evaluations of livestock distribution and activity patterns at very fine-scale temporal (300 sec) and spatial (<1 m) resolution. We used the Clark Animal Tracking System (Clark ATS) to evaluate cattle distribution and activity budget responses to landscape-scale disturbances including prescribed fire, invasive plants, and gray wolf reintroduction. We have also conducted intensive, shorter-term evaluations (e.g., 1-sec sampling interval) of behavioral and energetic differences between sympatric wild and domestic ungulates with this technology. Combined with remote sensing and GIS data and analysis tools, GPS tracking technologies provide a powerful means of monitoring or assessing animal behavior within both research and management contexts.