

---

## THE BLACKLEAF WILDLIFE MANAGEMENT AREA: 30 YEARS OF VEGETATION MONITORING

Gary Olson, Montana Department of Fish, Wildlife and Parks

Changes in native plant community cover and composition are generally gradual and affected by multiple environmental factors. Detection of vegetative trend can be difficult without long-term data collection efforts. Management of the Blackleaf Wildlife Management Area includes emphasizing the occurrence of highly productive, diverse plant communities that provide the best possible forage and cover for native wildlife species. To help accomplish this management goal, a range condition and trend survey was initiated shortly after purchase of the property to establish baseline vegetative condition. Fourteen permanently marked transects were established and species' cover values monitored every four years from 1979 - 2009. The area was rested from livestock grazing from 1979 - 1989; a non-traditional rotational grazing system was initiated in 1990. Rough fescue (*Festuca scabrella*), Hood's phlox (*Phlox hoodii*) horizontal juniper (*Juniperus horizontalis*) and shrubby cinquefoil (*Potentilla fruticosa*) were selected as indicator species that reflect overall plant community trend. Response of grasses, forbs and shrubs over the 30 year period are discussed, as well as individual species' trends. In general, while total plant cover remains static, grasses are increasing, forbs are declining. Vegetative response to a long-term rest livestock grazing system is presented as well.