

MANAGING PRAIRIES FOR BIOENERGY AND WILDLIFE: ECOSYSTEM SERVICES FROM LOCAL RENEWABLE ENERGY

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Abstract: Cellulosic bioenergy will be a critical renewable energy source as the nation transitions from fossil fuels in the coming decades. Prairies of the Upper Midwest specifically established for bioenergy can also provide numerous ecosystem services. Managing prairies and renovating marginal and idle land can provide local renewable energy, stimulate rural economies, sequester carbon in the soil, expand wildlife habitat, and protect pristine waters without displacing food crops. The *Benefits of Bioenergy* research program at the University of Minnesota runs multiple projects to determine the potential of grassland bioenergy in the region and understand the ecological dynamics of this emerging industry. Associated projects are interdisciplinary with broad foci. This poster outlines projects that study the agricultural buffering capabilities of prairie bioenergy systems, biomass yield potentials with respect to various plant communities, harvesting techniques to minimize disturbance to wildlife, and demonstrations that disseminate research and interact with future bioenergy producers in the region. Our lab conducts research to guide new energy policies, assist land-management decisions, and develop new technologies to produce and harvest prairie bioenergy. A coordinated effort to share critical findings and new research initiatives within the arena of bioenergy research and development will be essential to promote sustainable energy systems across the nation.