Continuous Living Cover Case Study:

# THE SOCIAL AND ENVIRONMENTAL IMPACT OF PERENNIAL FORAGE AND GRAZING IN THE **UPPER MIDWEST**

This impact value map shows the estimated annualized cost per acre for pasture and grazing system establishment and the projected benefits per acre per year from adopting Perennial Forage and Grazing strategies, in comparison to conventional practices.1

### **Projected Social Return on Investment**

For every \$1 dollar invested in establishing a perennial water quality, wildlife habitat, air quality and climate risk.

benefits leads to an SROI range of \$1.13 - \$10.14.

Cost Scenario: 20 acre pasture establishment and production with costs for grass and legumes, depreciated over the 20 year expected lifespan of fencing and water system, and based on a partial enterprise budget. While figures here are amortized, establishment costs are an upfront investment.

## Average Cost

per Acre per Year of Pasture Establishment and Grazing System \$148 Estimated Return on Investment per acre per year: \$500

## Outcomes | Impacts

Who Benefits?

Improved Water Quality and Reduced Freshwater Eutrophication \$187 Reduced surface water management and regulatory cost, improved aquatic ecosystems

Protected economic activity and property values, reduced health risks from contact with surface water 1711 Farm and

Landowner in subsequent vears

\$189

#### **Financial Hurdles:**

**Upfront Cost of Pasture** 

Establishment and Grazing System is \$30,000+ for a 20 acre pasture.

Funding to address these costs helps realize the outcomes in the diagram

per acre per year

in damages

avoided.3

\$338

\$1 **→** \$3.38

grazing system there is a projected \$3.38 in social and environmental value generated through net income gains,

A 50% increase or decrease in both costs and

Studies show positive net incomes from well-managed grazing systems with increasing returns more likely after the first year of adoption.

Average Annual On-farm Economic Benefit<sup>2</sup> (in subsequent years) \$162

Reduced input application, feed purchased, machinery costs, labor costs, field repair costs, and potential grazing/forage income

\$122

Reduced Soil Erosion from Water and Improved Hydrology

\$75

Reduced Drinking Water Treatment and Health Risks \$28

Reduced Soil Erosion from Wind \$20

Increased long-term soil productivity

Reduced costs of sedimentation, damage to waterways, road ditches, flood damage Reduced drinking water treatment from turbidity

Avoided costs from nitrate contamination, undesirable odor and taste, and cancers

Improved health from improved air quality

Reduced GHG Emissions \$15 Reduced climate risk

Improved Wildlife Habitat and Ecology \$13 Increased land and water-based recreation

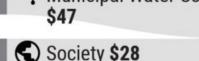
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**Taxpayers** 

Mi

**Local Community** Members \$114

Municipality and Municipal Water Users







2 This analysis utilizes a partial enterprise budget approach and assumes land costs are constant between production systems. 3 \$27 benefit from reduced soil erosion is also a Farm benefit



Impact Value Map for the Social and Environmental Impact of Perennial Forage and Grazing in the Upper Midwest

