

Economic Impact of biomass harvesting in Northern Wisconsin

OVERVIEW: The goal of this project is to measure the net economic value inclusive of economic and ecological benefits and costs, from harvesting residual biomass from Aspen forests in Wisconsin. The economic evaluation will be based on relevant research in environmental economics, data collected by previous researchers and applicable statistical and econometric analyses.

SUMMARY: Evaluating the economic impact of harvesting residual woody biomass in Aspen forests will require benefit-cost analyses of aggregate economic and ecological effects. Some of these effects will be entirely economic, for example market value of additional jobs generated or additional harvest costs involved, while some will be purely ecological, for example biodiversity loss, and a third type of effects will involve both economic and ecological aspects, for example benefits from additional timber supply from biomass harvest will depend on nutrients affected by the same harvest and needed for regenerating stands for future timber production. The third type of effects often overlaps with ecosystem services or 'natural capital' which could be hard to quantify due to their 'public good' characteristics. However economic tools like stated preference and revealed preference methods and nature measurement software like InVEST¹ have made it possible to quantify benefits from several ecosystem services like carbon sequestration, water quality, nutrient availability and timber supply, given data availability. Our goal in this economic impact analyses is to measure the net economic value from harvesting residual biomass from Aspen forests in Wisconsin, given all costs and benefits generated from this enterprise. The project will be completed in a stepwise manner from connected sub-projects involving specific aims.

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¹ <http://www.naturalcapitalproject.org/>