Project Impacts

NSRC-FUNDED RESEARCH FINAL REPORT

Mapping the Economic Value of Services from the Natural Ecosystem

PROJECT AWARD YEAR AND TITLE:

2002

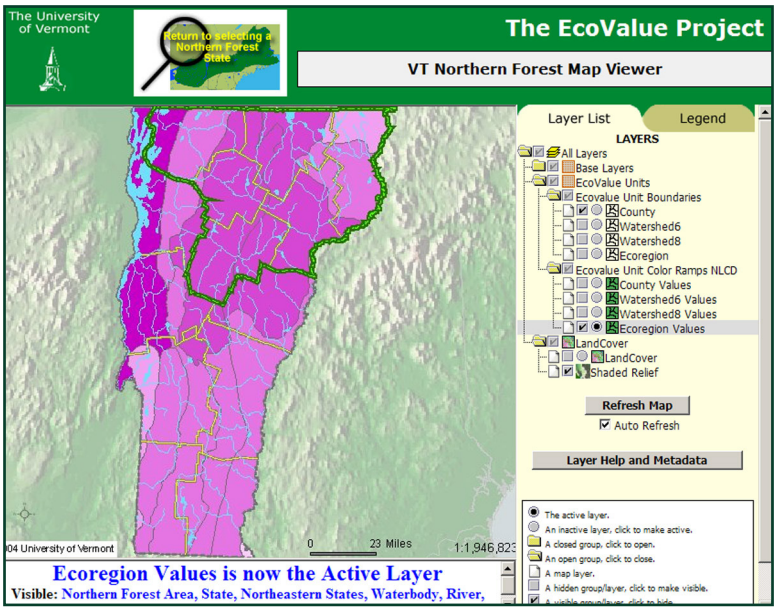
Assessing the Social and Economic Value of Ecosystem Services in the Northern Forest Region: A Geographic Information System (GIS) Approach to Landscape Valuation

PRINCIPAL INVESTIGATOR:

Matthew Wilson
University of Vermont
Matthew.Wilson2@CH2M.com

COLLABORATORS:

Austin Troy atroy@uvm.edu
Robert Costanza
Shuang Liu
Treg Christopher tchristo@uvm.edu
University of Vermont



Ecosystem goods and services are the benefits provided by natural ecosystems to human societies. These services include water supply, flood protection, soil formation, climate regulation, nutrient cycling, and waste treatment, among many other benefits. When the values of these ecosystem services are not fully accounted for in economic and land use decisions, the long-term health of nature and society may be compromised by an emphasis on the more readily apparent, short-term economic benefits from development and industry.

Using data from other studies that placed dollar values on specific ecosystem goods and services, NSRC researchers created databases and maps, using GIS (geographic information systems), that link land cover types, ecosystem services, and economic values. The maps are available on the web site: http://ecovalue.uvm.edu/NorthernForests. Users may select geographic areas within the Northern Forest and view monetary estimates of ecosystem services for that area.

The identification and classification of ecosystem goods and services using computer-generated maps will provide a critical planning tool for allocating resources more efficiently among competing land use demands. Once quantified and mapped, the economic values of ecosystem services can help decision-makers and landowners rationally evaluate trade-offs among different land management options they will face as forests come under increasing human pressure.

Funding support for this project was provided by the Northeastern States Research Cooperative (NSRC), a partnership of Northern Forest states (New Hampshire, Vermont, Maine, and New York), in coordination with the USDA Forest Service.