

LCMS LANDSCAPE CHANGE MONITORING SYSTEM – RESULTS FROM AN INFORMATION NEEDS ASSESSMENT

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Abstract—Understanding changes in land use and land cover over space and time provides an important means to evaluate complex interactions between human and biophysical systems, to project future conditions, and to design mitigation and adaptive management strategies. Assessing and monitoring landscape change is evolving into a foundational element of climate change adaptation, ecological restoration, and resource sustainability. Landscape change data are core to Forest Service functions including: land management planning, restoration analysis, carbon accounting, greenhouse gas emission reporting, biomass and bioenergy assessments, hydrologic function assessments, fire and fuels planning and management, and forest and rangeland health assessments.

The Forest Service is collaborating with federal and academic scientists to evaluate the status of existing landscape change information systems, assess gaps in information content, and implement science and information system efforts aimed at improving our ability to understand and monitor landscape changes through time. Promising research for enhanced landscape change detection techniques will enable resource managers to attain a more complete and precise understanding of how, why, and to what extent the landscape is changing.

In order to support strategic investment decisions on information resources, the Forest Service Geospatial Management Office has distributed a voluntary information needs survey to a broad audience of Agency resource and information management professionals to assess current and projected requirements for landscape change information. The survey, in conjunction with a technical assessment of existing landscape change information products, will enable the Agency and our partners to prioritize efforts that develop and maintain needed information assets, and results from the survey will be used to help define requirements for future landscape level change products.

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