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# RECOVER: An Automated, Cloud-Based Decision Support System for Post-Fire Rehabilitation Planning

J. L. Schnase[1], M. L. Carroll[2], K. T. Weber[4], M. E. Brown[2], R. L. Gill[1], M. Wooten[2], J. May[4], K. Serr[4], E. Smith[4], R. Goldsby[4], K. Newtoff[3], K. Bradford[3], C. Doyle[3], E. Volker[3], and S. Weber[3]

[1]Office of Computational and Information Sciences and Technology, NASA Goddard Space Flight Center, Greenbelt, MD, 20771 USA
[2]Biospheric Science Laboratory, NASA Goddard Space Flight Center, Greenbelt, MD, 20771 USA
[3]DEVELOP Program Office, NASA Goddard Space Flight Center, Greenbelt, MD, 20771 USA
[4]Idaho State University GIS Training and Research Center, Pocatello, Idaho USA

Abstract. RECOVER is a site-specific decision support system that automatically brings together in a single analysis environment the information necessary for post-fire rehabilitation decision-making. After a major wildfire, law requires that the federal land management agencies certify a comprehensive plan for public safety, burned area stabilization, resource protection, and site recovery. These burned area emergency response (BAER) plans are a crucial part of our national response to wildfire disasters and depend heavily on data acquired from a variety of sources. Final plans are due within 21 days of control of a major wildfire and become the guiding document for managing the activities and budgets for all subsequent remediation efforts. There are few instances in the federal government where plans of such wide-ranging scope and importance are assembled on such short notice and translated into action more quickly. RECOVER has been designed in close collaboration with our agency partners and directly addresses their high-priority decision-making requirements. In response to a fire detection event, RECOVER uses the rapid resource allocation capabilities of cloud computing to automatically collect Earth observational data, derived decision products, and historic biophysical data so that when the fire is contained, BAER teams will have a complete and ready-to-use RECOVER dataset and GIS analysis environment customized for the target wildfire. Initial studies suggest that RECOVER can transform this information-intensive process by reducing from days to a matter of minutes the time required to assemble and deliver crucial wildfire-related data.

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