

Project Manager Qualifications and Organization Description:

Marvin Bauer is professor of remote sensing and director of the Remote Sensing and Geospatial Analysis Laboratory (rsl.gis.umn.edu) at the University of Minnesota. He has extensive experience in research and applications of satellite remote sensing to inventory and monitor land and water resources. His current research emphasizes the development of quantitative satellite remote sensing for land cover classification and change detection, impervious surface mapping, and monitoring lake water quality. He has been principal investigator of several NASA grants, as well as State of Minnesota contracts for mapping and monitoring land cover, impervious surface area and lake and river quality. Much of his research involves interdisciplinary collaborations with faculty of other colleges and departments including Civil Engineering, Ecology and Evolutionary Behavior, Geography, and Soil, Water and Climate. He teaches classes in remote sensing of natural resources and environment and digital remote sensing.

A fellow of the American Society of Photogrammetry and Remote Sensing (ASPRS), Bauer has received several awards recognizing his contributions to remote sensing research, teaching and service, including the Lifetime Achievement Award (2006) from the Minnesota GIS/LIS Consortium, recognizing contributions to the development of remote sensing applications in Minnesota; the NASA Distinguished Public Service Medal (1995), recognizing outstanding scientific contributions over the past 25 years to NASA's terrestrial remote sensing programs; and the ASPRS SAIC Estes Memorial Teaching Award (2007). He was a visiting scientist (1994-95) at the NASA Goddard Space Flight Center and is Editor-in-Chief of Remote Sensing of Environment journal, the #1-rated remote sensing journal.

Joseph Knight, assistant professor in the Department of Forest Resources, conducts research characterizing natural and anthropogenic landscape change using multispectral and multitemporal image data to assess impacts on natural resources, wetlands mapping and characterization, and thematic accuracy assessment methods development.

Steven Manson is an associate professor in the Department of Geography and fellow of the University's Institute on the Environment. His research combines environmental research, social science approaches, and geographic information science to understand changing urban and rural landscapes. This work is part of his longer term research on environmental change, decision making, and understanding complex human-environment systems. He was a NASA Earth System Science Fellow, received the Young Scholar Award from the University Consortium for Geographic Information Science, a McKnight Land Grant Professorship, and is a NASA New Investigator in Earth-Sun System Science.

Bruce Wilson is a limnologist and research scientist with the Minnesota Pollution Control Agency. He has led several water quality assessment efforts of major lake and river systems in Minnesota and has provided technical assistance to over 50 locally led watershed management projects. His current work includes monitoring the effectiveness of stormwater Best Management Practices and the Minimal Impact Design Standards Project.

Organization Description. Remote sensing research, focusing on forestry applications of aerial photography, was initiated at the University of Minnesota in 1952. The Remote Sensing Laboratory, established in 1972, has been the focal point of research, instruction, and outreach in natural resource applications of aerial photography and satellite imagery. The Laboratory has contributed to the development and application of aerial photography, and more recently satellite remote sensing, by resource agencies in Minnesota.