

NetMap integrated tools and watershed data: scientifically based and spatially explicit solutions for natural resource management.

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Abstract. Land management organizations, including all levels of government agencies and NGOs, frequently have common analytical objectives with similar questions and data needs for conservation, restoration, and management. The increasing spatial extent and degree of spatial overlaps in analyses mean that managers need the ability to communicate and share standardized data between organizations. Declining budgets and increasing demands on managers suggest that a pragmatic and integrated approach to applied watershed management is required. Earth Systems Institute (ESI) collaborates with multiple agencies and organizations to provide the NetMap system of geospatial datasets and decision support tools that are scientifically based, up-to-date, integrated, and spatially explicit. ESI has provided almost 400,000 km² with another 137,000 km² pending of geospatial data to user communities in the western US and internationally. Varying user skill levels indicate the need for systems that provide a range of tools hence NetMap provides GIS-based tools for users with GIS skills and web browser based tools for others. The data can be used with more than 70 tools that analyze of road and hillslope erosion, wood recruitment, thermal loading, aquatic habitat, pre- and post-fire conditions, and so on. NetMap is continually under development as science progresses and deepens our knowledge of physical processes, management treatments, and landscape and aquatic responses.

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