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Land use Planning and Community-Based programs – Outreach and Communication.

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*Title: The development of user-friendly publications to advance locally led watershed-scale assessment, protection and restoration in South Carolina.*

The USDA Natural Resources Conservation Service (NRCS) in South Carolina and the Earth Sciences and Resources Institute at the University of South Carolina (ESRI-USC) are collaborating in a three-part project designed to advance locally-led watershed-scale assessment, protection and restoration in South Carolina.

The first part of the project involved the development of 36 Rapid Watershed Assessments (RWA's) using 8-digit Hydrologic Unit Areas (HUA's) as the unit of analysis. The RWAs are "one-stop-shop" summaries of resource concerns and opportunities, by 8-digit HUC, that will serve the NRCS in planning future conservation investments and/or for communicating resource concerns to diverse stakeholder groups. The data and information for the RWAs are all from publicly available sources that included the South Carolina Department of Natural Resources, the South Carolina Department of Health and Environmental Control SCDHEC, the NRCS Soil Survey, the US Fish and Wildlife Service and the National Agricultural Statistical Service and other organizations like Natureserve. The RWA's combine text, maps, tables and pictures to communicate resource concerns (soil, water, air, plants, animals and economic factors) in a way that is accurate and rigorous, yet clear and unambiguous for audiences with varying levels of technical knowledge. The RWA's (each typically 20 pages) can be used as references for discussion during locally-led identification of resource concerns and priorities.

The second part of the project takes a broader, statewide view of resource concerns and assimilates this information into an illustrated, bound publication entitled *Summary of Natural Resource Concerns in South Carolina* (124 pages). The book builds on the information in the RWA's and uses quantitative estimates (e.g., size, scope, value) to prioritize SC's 8-digit HUAs by resource need. The result is a product that identifies and organizes diverse natural resource information into a single document that conservation leaders, resource

professionals and units of governments can use to identify existing resource conditions and conservation opportunities.

The third part of the project is the development of an Assessment Matrix for each 8-digit HUA which considers the type, size and placement of USDA-NRCS conservation practices as a baseline to plan for future conservation practices. One of the reasons that an accurate assessment of on-the-ground conservation practices can be made is that historical (from 2003- present) USDA-NRCS conservation practice data are now available in spatial format. Over of 50,000 records of conservation practice points are available with attributes that include land use (e.g., crop, pasture, forest, wildlife, hay) practice name/code, amount, units (e.g., acres, linear feet), primary resource concern addressed, and funding program. Because the data are spatial, additional attributes can be given to the practice points e.g., Common Resource Area (CRA) or ecoregion (e.g., Blue Ridge, Southern Piedmont, Sandhills, Southern Coastal Plains), Hydrologic Unit Code (typically 8 digits, but not restricted to this resolution) or county. Originally, the thought was to look at conservation practices by land use and by CRA. The rationale was that for a given land use, as the CRA varies the primary resource concerns will vary and therefore the set of appropriate conservation practices to address the resource concerns would also vary. For example, the conservation practices used on cropland in the Piedmont are significantly different from those used in the Carolina Flatwoods or the Tidewater CRAs. Another significant factor that affects the use of conservation practices is the conservation program that funds the practice. Some programs focus on specific resource concerns, for example the Wildlife Habitat Improvement Program (WHIP) addresses wildlife issues and will preferentially encourage wildlife-specific conservation practices while the Environmental Quality Incentives Program (EQIP) tends to encourage conservation practices that address resource concerns related to farming operations e.g., soil erosion or nutrients and organics in surface waters. This means that the suite of conservation programs used for a given land use in a given CRA typically varies based on the funding program used. In our analyses, we use a series of scenarios based on land use, CRA and conservation program – this scenario approach provides a reasonable framework with which to assess past conservation practice application and to plan for future conservation practices. Based on the RWAs and the *Summary of Natural Resource Concerns in South Carolina* we are able to qualitatively assess any resource concerns that may need more attention and from this, we can develop a future practices scenario which serves (1) as an aid to the planning of future conservation resources and (2) to communicate gaps and opportunities (given specific resource concerns) to frontline conservationists and to other stakeholders.

These tools (RWA, Summary of Resource Concerns and Assessment Matrices) are primarily aimed at making resource concern information accessible to an internal audience (typically the District Conservationist) who would be responsible for working one-on-one with stakeholders such as private landowners) to identify and address their resource concerns. This series of projects has created a treasure-trove of collected information which we plan to convert to different formats and media (e.g., more interactive resource assessments on-line) and to combine with other information (e.g., mini documentaries about the benefits of specific conservation practices) that may more directly reach landowners and further drive locally-led conservation.