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Agreement Number: G10AC00240

Project Title: Building a Business Case for Shared Geospatial Data and Services to Support Transportation Planning in North Carolina

Interim or Final Report: Interim

Organization: North Carolina Center for Geographic Information and Analysis
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Listing of Collaborating Organizations: Interagency Leadership Team
NC Geographic Information Coordinating Council

Executive Summary

North Carolina has an active group of stakeholders involved in the transportation planning and environmental review process. This group called the Interagency Leadership Team (ILT) has as one of its primary goals the development of a comprehensive, shared GIS database to support planning and permitting activities. A GIS pilot project in Lenoir County is being conducted as proof of the value of GIS data to the team.

The Center for Geographic Information and Analysis (CGIA) is applying the ROI methodology to the pilot project in order to further show the value of GIS data for decision making by the stakeholder agencies. The ILT has been briefed on the ROI project and supports the effort. CGIA will identify staff in each of the 11 agencies and schedule interviews for data gathering. Focus will be placed on obtaining both qualitative and quantitative information about the value of GIS data where each agency is concerned. The ROI methodology and tools will be used to record and summarize this information for each agency and across the agencies. The costs of data development in Lenoir County will be compared to the benefits identified, yielding the metrics called for in the methodology. CGIA will summarize the results, calculate the metrics, and share the initial results with the ILT and seek comment. Further refinement of the analysis will yield final study results. Once completed, the ROI study results will be shared with additional key stakeholders such as the NC Office of State Budget and Management and the NC General Assembly.

Project Narrative

The Interagency Leadership has an ongoing need for current, accurate, and complete GIS data to support transportation planning and environmental review processes. This data should be available statewide, maintained on a regular basis, and shared among the ILT agencies to support these efforts. The ILT consists of the following state and federal government agencies:

- NC Department of Transportation
- NC Department of Environment and Natural Resources
- NC Department of Cultural Resources
- NC Department of Commerce
- NC Department of Agriculture and Consumer Services
- NC Wildlife Resources Commission
- Federal Highway Administration
- Environmental Protection Agency
- US Army Corps of Engineers
- US Fish and Wildlife Service
- National Marine Fisheries Service

The ILT has identified 31 high-priority data layers that are most critical to planning and permitting processes. The data themes include wetlands and headwater streams, game lands, state parks, designated historic sites and districts, stream mapping, archaeological sites, land trust conservation properties, and natural heritage element occurrences, among others. The Lenoir County pilot project includes countywide data for each layer. The data is served through NC OneMap. Costs associated with preparation of the data will be documented. Benefits derived from the availability of the data layers will be documented as well.

CGIA briefed the ILT on the goals of the grant which are: apply return on investment (ROI) methodology to the Lenoir County pilot; produce results that can support statewide development of the shared GIS database; and evaluate the ROI methodology for further use in order to show the benefits of GIS investment statewide. Further, the briefing conveyed the expected process of interviewing resource managers and other staff in the 11 agencies (i.e., those involved specifically in the planning and permitting processes). These subject matter experts will provide key information for calculating the metrics called for in the ROI methodology.

The ILT agreed to support the data collection effort and work with CGIA in evaluating the results once the metrics have been calculated and results/interpretations have been generated from them.

The next steps in the project scope of work and associated timeline are described below:

1. Identify staff within each of the 11 agencies to interview and schedule the interviews. Large agencies with several sections will require several interviews potentially yielding more detailed benefits. [December-January]
2. Collect data from the interviews and populate ROI templates. [February-March]

3. Perform follow up on the data collection effort as needed. Finalize the completed templates and calculate metrics. [April-May]
4. Prepare results and share with the Interagency Leadership Team. [May-June]
5. Communicate results to groups external to the ILT including Geographic Information Coordinating Council, Office of State Budget and Management, and NC General Assembly. [July-August]

These steps are consistent with the original scope of work for the project. CGIA will produce the final report within 90 days of project completion.

The only significant deviation from the original proposal is in the project timeline. The original timeline called for rapid data collection and ROI analysis to meet the needs of the state budgeting process for the 2011-13 biennium. It is clear that the original timeline cannot be met based on the current status of the project. CGIA will request a five-month time extension to the project, moving the completion date from March 31, 2011 to August 31, 2011. The necessary staff resources will be applied to the project to meet the revised timeline and deliver the anticipated products.

The ROI methodology and the need to generate this type of information to justify requests for GIS investments is even more important today than when the project was first proposed. Greater levels of collaboration are expected among state government agencies and partners. There is a greater level of emphasis on maximizing efficiencies in state government programs and there is an even stronger need to show clear benefits from state expenditures. The results of this project will serve as an example.