



Development of Geographic Information System (GIS) Tools for Transportation Studies

Start Date: Oct 2005

POC:

Projected End Date: Sep 2008

[POC](#)

Problem Addressed:

The development of economic models must be related to geographic networks to correctly assign the traffic movement across specific infrastructure facilities. Current USACE economic methodologies do not provide direct linkages to infrastructure flows on transportation networks, limiting efforts to better understand the relationship between economic and observed shipment patterns. These networks should include not only waterway facilities and channels, but also the major highway and rail networks, and significant terminals for freight shipments. Furthermore, each Corps study is conducted somewhat independently, so a common network database and traffic flows may provide a replicable and consistent starting point for Corps economic research.

Objective:

To develop both a routable GIS multimodal network for analytical purposes and a GIS interface to the various databases developed in the multiport and multimodal analysis. This requires identifying current data or developing new data for public release, but also the use of detailed flows specific for Corps planning and policy needs. The network and traffic flows will include not only waterway traffic (domestic and international) but also information for other modes (highway and rail). The database should be readily transferable as either inputs or outputs from other modules developed under the NETS program. The work will also include developing simple maps that highlight the importance of the nations waterways for various geographic segments. The initial efforts focus on inventorying the various GIS databases currently available, and potential linkages to current NETS research activities. A review of current models for all modes and facilities will be developed to provide additional guidance as related to developing assignment models for traffic flows. The effort is occurring jointly with the development of a multimodal and multiport studies.

Benefits:

A national, multimodal GIS network provides Corps economists and planners a common starting point for evaluating specific policy options, but also a mechanism to present findings in a consistent manner. By working with other government agencies, other data and analytical tools would provide additional information at a lower cost to Corps personnel while also conveying the importance of Corps actions to non-traditional audiences. This work effort will not replace local economic and planning actions, but would serve as a starting point for local users while providing a consistent framework for national research.

Status:

In Progress



Contract Data:

120171, A1060

Progress:

Products (Bookshelf/Toolbox):

Related Links:

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