

Feasibility of Using GIS Data to Catalog a Representative Sample of Food Deserts and Characteristics of the SNAP Households Residing There

Client: U.S. Department of Agriculture, Food and Nutrition Service

Overview

This study identified and evaluated various data sources and geographic information system (GIS) tools that could be used to identify Supplemental Nutrition Assistance Program (SNAP) participant households who reside in food deserts. Food deserts are geographic areas where access to affordable, healthy food choices is restricted or nonexistent. Such access often is compromised in low-income areas where corner stores, convenience stores, and fast-food restaurants may outnumber or take the place of supermarkets and other food retailers that offer a variety of healthy foods. The findings from this study helped the Food and Nutrition Service determine whether additional GIS tools could help them improve access to a variety of high-quality, affordable food retailers among SNAP participant households.

The study addressed the following research questions:

- What sources of data are available on SNAP households (e.g., addresses, household characteristics, food-shopping patterns)? What are their main features?

- What sources of data are available on food outlets (e.g., address, store type, SNAP retailer)? What are their main features?
- What tools are available to link the relevant data sources and identify food deserts (with or without GIS)? What are their main features?
- What resources and procedures are needed to access and use these data and tools as inputs for an ongoing catalog of food deserts for SNAP? How do they compare in format requirements, accuracy, detail level, cost, and maintenance effort?
- What are the advantages, limitations, and uncertainties involved with each alternative?

For this project, Insight—

- Conducted an environmental scan of extant data sources (for identifying addresses and characteristics of SNAP households and food stores)
- Conducted an environmental scan of GIS options for geocoding, distance calculations, and data linkage
- Prepared a detailed assessment of the advantages and limitations of identified data sources and GIS options, both as stand-alone resources and in combination with other resources
- Delivered a final report describing the identified resources, results of the analyses, and recommendations



Products

Final report, Examine the Feasibility of Using GIS Data to Catalog a Representative Sample of Food Deserts and Characteristics of the SNAP Households Residing There (February 2012)