The term “food desert” is increasingly being used by researchers and policymakers to describe low income areas that do not have easy access (within walking distance in urban areas or a reasonable driving distance in rural areas) to healthy food, typically in the form of a supermarket. In 2009, the Johns Hopkins Center for a Livable Future (CLF) developed a food desert map for Baltimore City based on household income and access to supermarkets. In 2012, the Center partnered with Baltimore City’s Office of Sustainability, as part of the Baltimore Food Policy Initiative, to create a new food desert definition and update the original food desert map.

The new food desert definition is tied to a more robust methodology that considers four factors - 1) distance to supermarkets, 2) poverty, measured relative to the Federal Poverty Level, 3) vehicle availability, and 4) the quality and availability of healthy food in all food stores. Based on these factors, a food desert is defined as:

“An area where the distance to a supermarket is more than ¼ mile, the median household income is at or below 185% of the Federal Poverty Level, over 40% of households have no vehicle available, and the average Healthy Food Availability Index score for supermarkets, convenience and corner stores is low (measured using the Nutrition Environment Measurement Survey).”

Using Geographic Information System (GIS) software, each of these factors were mapped individually and then layered based on geographic locations. Data analyzing each factor are available at different geographies, for example, neighborhood boundaries versus census tracts. In order to examine factors on a common scale, the data was aggregated into grid cells the size of a city block. To qualify as a food desert, a cell had to meet all the criteria based on the factors discussed above. The new food desert map shows those grid cells that met the food desert criteria.

The Food Desert Map was developed as a partnership between the Baltimore Food Policy Initiative (BFPI) and Johns Hopkins Center for a Livable Future, Bloomberg School of Public Health. The Baltimore Food Policy Initiative is a Baltimore City intergovernmental collaboration between the Office of Sustainability, Department of Planning, Health Department and Baltimore Development Corporation. The goal is to increase access to healthy and affordable foods in Baltimore City food deserts. The Johns Hopkins Center for a Livable Future develops food desert maps through its Maryland Food System Map Project, which aims to collect and analyze data about food production, distribution and availability throughout the state, to better understand the local food system and identify opportunities for improvement.

Visit the Maryland Food System Map Project at: MDFOODSYSTEMMAP.ORG