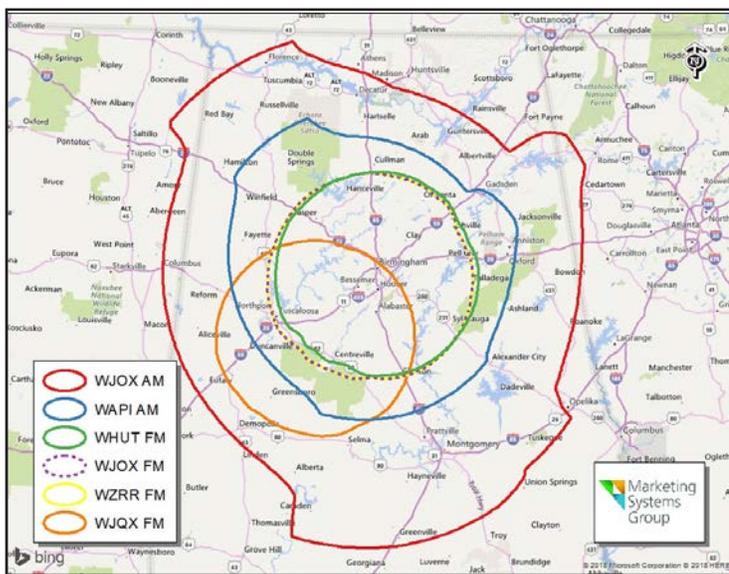


GEO DEMOGRAPHIC SERVICES

There is often no better way to illustrate valuable insight about your target geography than through reports and maps. MSG offers a full suite of GIS & GEO-DEM services to help put your data in context.

These essential tools will help you make informed business decisions, quickly and easily. Our data sources include up-to-date demographics, census, and postal geographies, all of which provide the most accurate data available.

Listed below are several examples of the different types of maps we can produce and the information they provide.

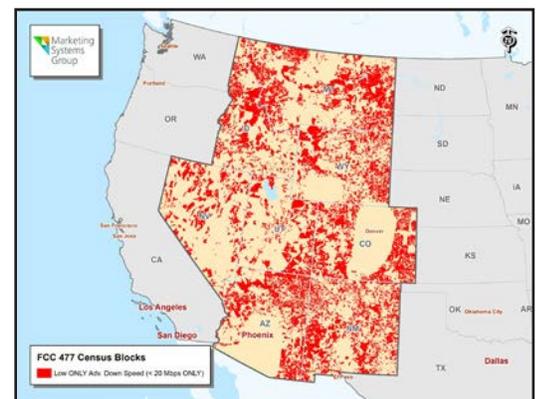


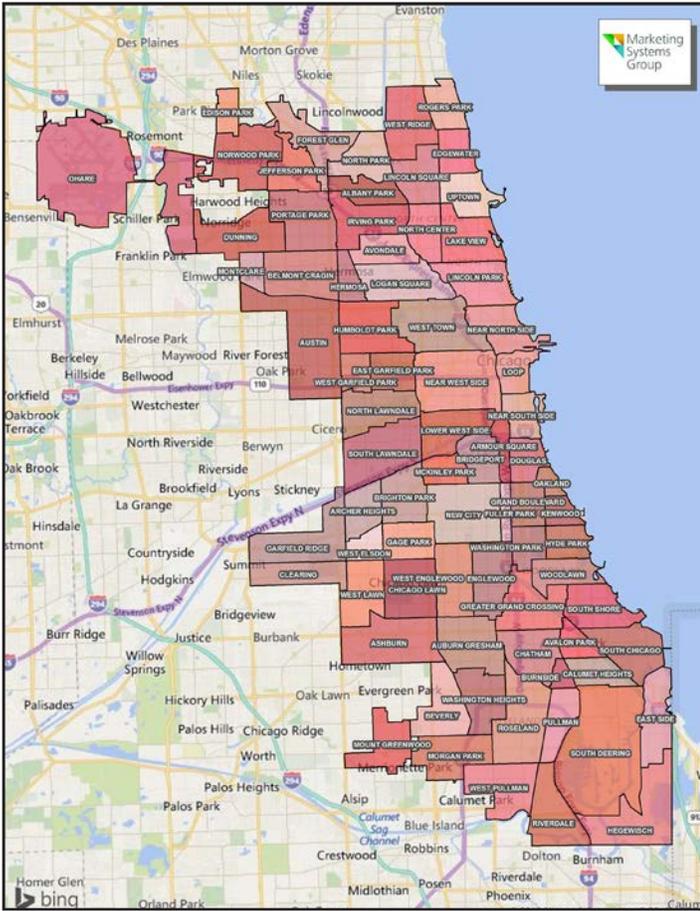
AM/FM Radio Broadcast Coverage: Birmingham, AL

Using publicly sourced radio broadcast data provided by the FCC, the broadcast signal for each radio station is converted to shapefile format to visualize the overlapping coverage areas. The underlying census geography for each station's service area is used to produce demographic and geographic reports for various analytic and marketing purposes such as radio commercial advertising, etc.

FCC Broadband Speed Available: Mountain Time Zone

One of the main goals outlined under the National Broadband Initiative Plan is to provide more 100 million American homes with high speed internet access by 2020. Accessing publicly accessible data sourced by the FCC and NTIA on internet speeds and availability has been an invaluable tool for identifying geographic areas still lacking access to high speed internet. After converting the data to shapefile format, the census geography having a relationship with the areas in red (where internet speed is < 20 Mbps according to the data) is collected and used to produce demographic profiles for each of the red clusters shown in the map.





Chicago Neighborhood Boundaries

Did you know that some geographic areas are not officially recognized by the census?

Demographic reports for non-census related geography such as city neighborhoods are produced by overlaying and extrapolating the underlying census geography related to each neighborhood.

The neighborhoods for the city of Chicago shown in this map were delineated using client provided survey data. Once the boundaries for each neighborhood were delineated, the underlying census geography is then used to produce custom demographic reports for each neighborhood.

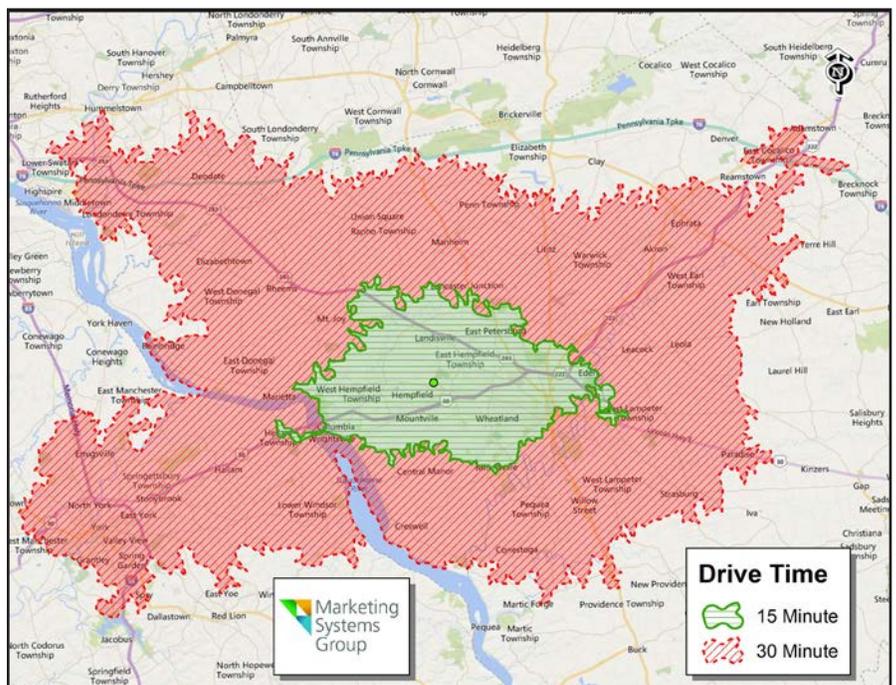
These type of maps and reports can be used by local community and non-profit organizations applying for local government grants or funds.

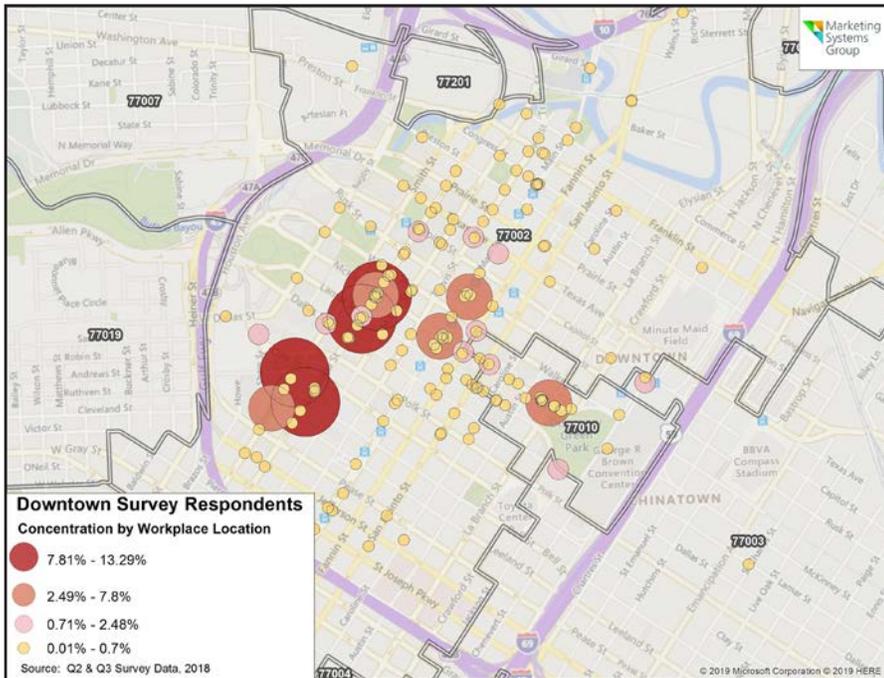
15 & 30 Minute Drive Time Contours

From food delivery service to emergency evacuation planning, drive time contours can be created by distance or time traveled from any given location up to 30 miles or 30 minutes for individual drive time reports (batch drive time reports for custom projects are available up to 60 miles and 60 minutes).

In this map example, 15 and 30 minute drive time contours are mapped from an undisclosed business which offers food delivery service to customers within a 15 minute drive time window (green shaded area).

Looking to expand delivery services to the left (west) of the waterway, the client was able to visualize how much area could be serviced within a 30 minute drive time contour (red shaded area).





Downtown Survey Respondents: Mapping Survey Results

What better way to present the results of a survey than with a map? An ongoing study of commuters to/from downtown Houston, TX conducted by an undisclosed non-profit organization depends on maps like this one to assure all qualifying survey respondents work within the study area. Each colored circle in the map display corresponds to the workplace locations reported in the survey. Larger circles indicate the highest concentration of workplace locations.

Radii Analysis

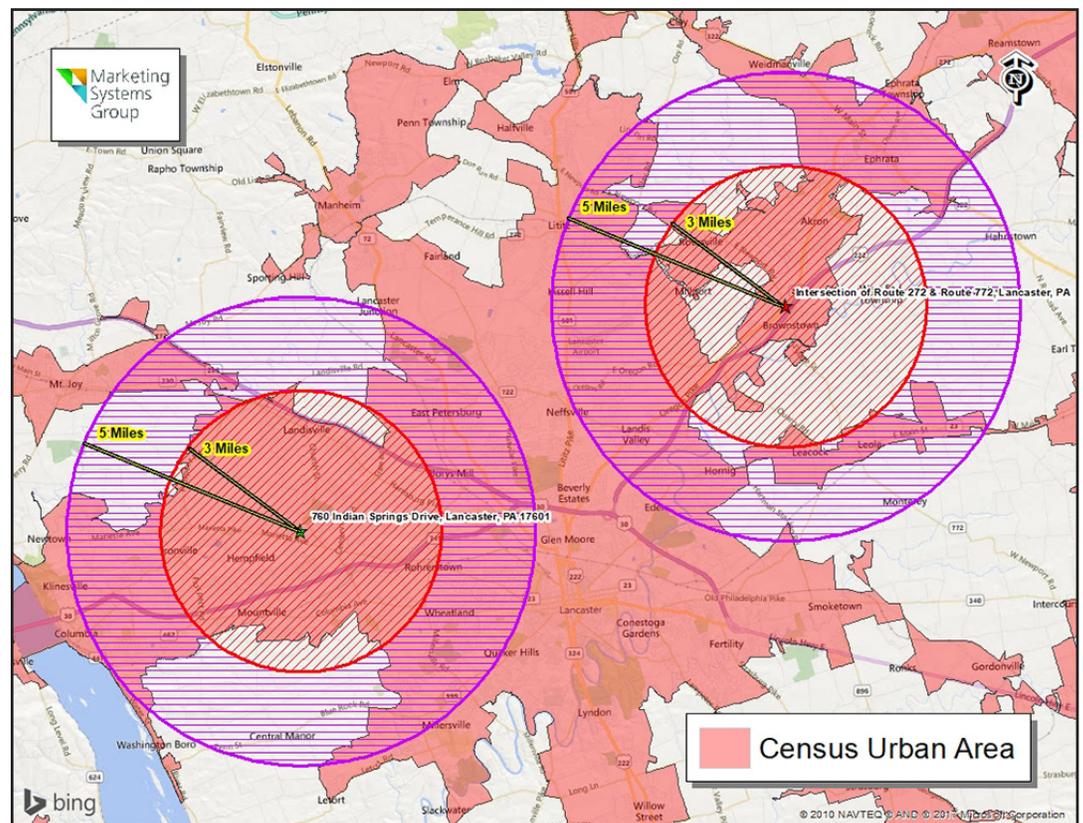
Radii reports provide demographic and housing characteristics in proximity to any location (address street intersection, geographic coordinates, etc.). Radii mapping is often needed when radii reports yield unexpected results.

This map displays 3 & 5 mile radii areas for two different locations within close proximity to one another.

Expecting to see similar results when comparing

the radii areas of both locations, the client questioned why the population and household figures from the reports were similar among the 5 miles areas but much different among the 3 mile areas.

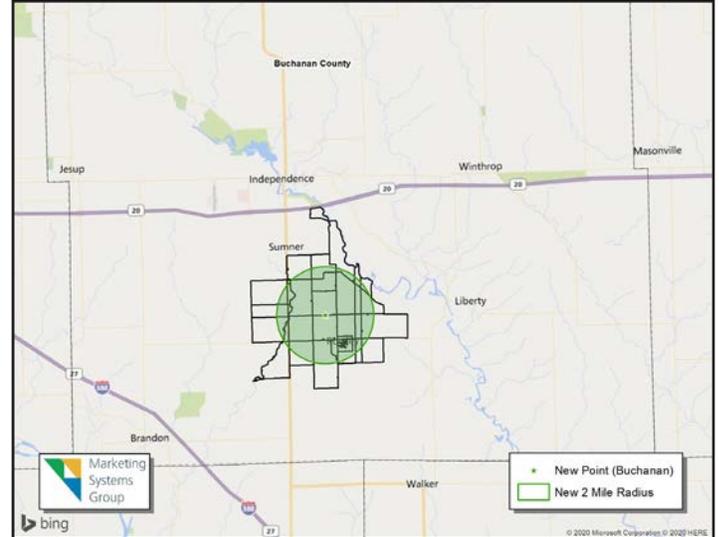
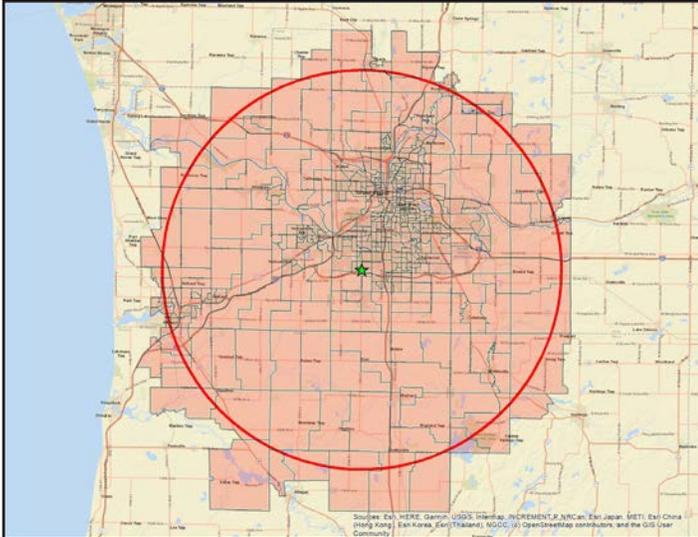
By mapping the radii, we can see that there is much more urban area in the 3 mile ring on the left compared with the 3 mile ring on the right which explains the disparity in the demographic and household figures.



Radius Maps

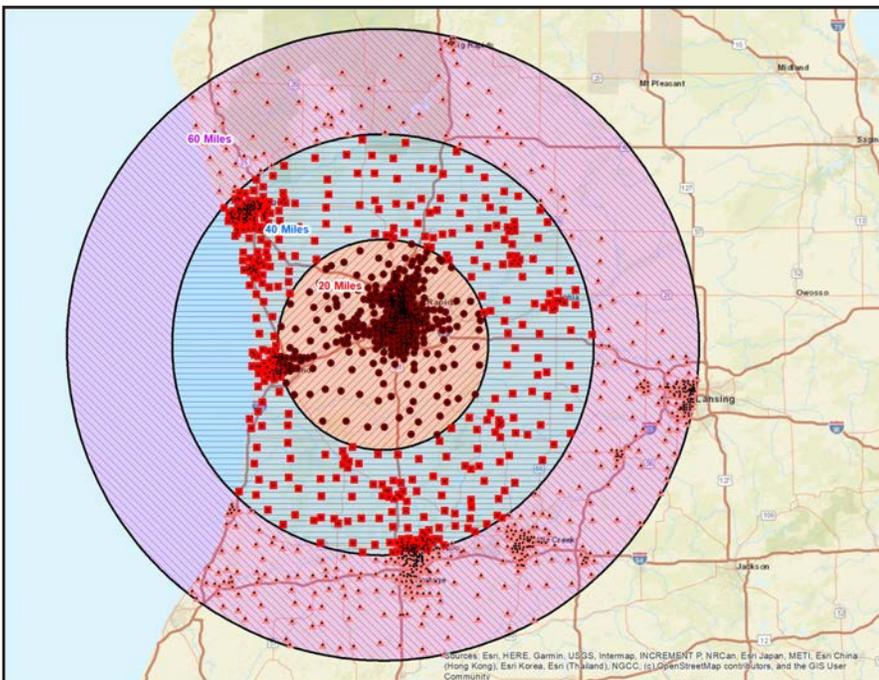
Radius maps come in all sorts of shapes and sizes. From the simplest task of mapping a single radius around one location to multiple radii around many locations, radius mapping can easily turn the simplest of jobs into the some of the most complex projects.

The following are a set of different types of radius maps ranging from the most basic to advanced:



One Location, One Ring.

A radius is created around a single location (green star). Data is then appended to the underlying geography and put into a report providing a demographic and geographic breakdown of the area within the radius.



One Location, Multiple Rings

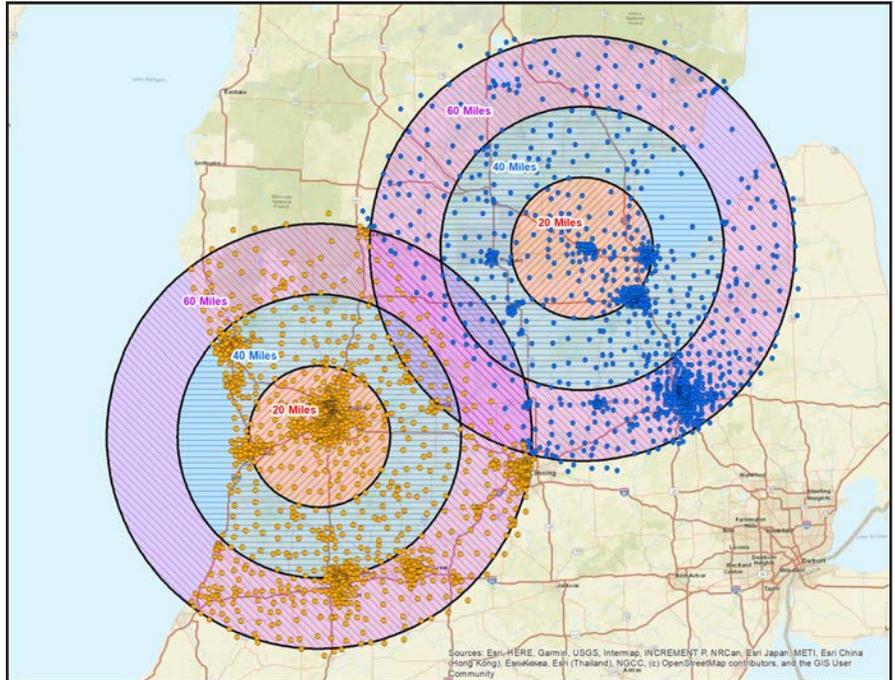
A 20- 40- and 60-mile radii ring is created around a single location. The underlying geography is then assigned to one of the three area rings based on the geographic centroid (center). Data is then appended to each area and put into a report providing the demographic and geographic breakdown for each of the three areas.

In this map, the census block group centroids are highlighted to visualize the density of the population within each ring.

Multiple Locations with Multiple Rings

20- 40- and 60- mile radii rings are created around two locations creating overlapping areas between both locations. The geographic centroids for the underlying geography are now assigned based on the distance to the nearest location.

The census block group centroids in this map are color coded to help visualize the assigned relationship based on distance.



Orange centroids are assigned to the location to the left and blue centroids to the location on the right. Each centroid is then assigned to a radius to create three reports (20- 40- and 60- miles) for each location.

Multiple Locations with One Ring

Sounds simple, but it really comes down to how distance between the locations and the size of the radii. In this example we have 25- mile rings for 14 locations that are within close proximity to one another creating significant overlap.

Underlying geographies are assigned based on the distance to the nearest location. Reports are created for each of the 14 locations and the census block groups are color coded to better visualize the assignment by nearest location for each block group.

