ENVIRONICS ANALYTICS

CLARITAS CARTOGRAPHIC UPDATE 2019 METHODOLOGY

WHAT IT IS

Claritas has a proven track record as an industry leader producing quality data and maintains this position by continually innovating and improving upon the methodology used for the annual cartographic update. Claritas utilizes new and existing external data resources that can lead to increased data detail and is continually looking to the future for ways that may impact the geospatial data released as part of the cartographic update process.

This document outlines the process for the development of the 2019 Claritas Cartographic Update, which includes the following standard geographic levels:

- 2010 Census: block, block group, tract, county, state, county subdivision (MCD/CCD), place, country (U.S.)
- Nielsen DMA (Designated Market Areas)
- 5-Digit ZIP Code
- Metropolitan areas

The 2019 update also includes cross-reference files that show the linkage between the various geographic levels.

CHANGES TO METHODOLOGY AND DATA SOURCES

Claritas has a long-standing relationship with TomTom® North America Inc. (TomTom) as a primary provider of geographic and digital map data used in the Claritas Cartographic Update. TomTom is continually updating its digital map data with real-world geographic changes, which are then passed on to Claritas clients. Claritas is always looking for new, innovative ways to improve on processing techniques in order to adapt to a constantly changing geographic landscape and to take advantage of new resources. For the 2019 update, the following sources were used:

- TomTom MultiNet® Administrative Areas, v2012.09
- TomTom MultiNet Post Enhancements, v2017.12
- TomTom MultiNet Enterprise, v2017.12
- Nielsen DMA Region County Assignment Changes (2018-2019 Television Year)
- Office of Management and Budget (OMB) Bulletin No. 17-01 and Bulletin No 18-03 (Revised Delineations of Metropolitan and Micropolitan Statistical Areas)

The Claritas 2019 Cartographic Update contains boundaries from the 2010 census. Census boundaries are updated and released after each decennial census and generally remain static for 10 years. Updates can take place outside of this schedule when driven by a significant county change implemented by TomTom. The renaming of Shannon County, SD to Oglala Lakota, SD with the 2017 update was such a change.

Status of Major Boundary Levels

DMA and Postal Code

Nielsen DMA boundaries and postal boundaries (5-Digit ZIP Code) are updated annually.

Metropolitan Areas

Micropolitan and metropolitan area core-based statistical area boundaries and combined statistical areas are updated pursuant to changes announced by the Office of Management and Budget (OMB). The 2019 Cartographic Update includes the newest OMB metropolitan area delineations based on 2010 census data.

BLOCK LEVEL GEOGRAPHIES

The roster of census blocks, along with block group, tract, county, county subdivision (MCD/CCD), and place were established using the TomTom MultiNet Administrative Areas product, in addition to other sources such as the Census Bureau's PL94-171 and SF1 data.

TomTom MultiNet Administrative Areas v2011.12, which contained the initial release of 2010 census boundaries, did not include water features, such as lakes and rivers. In addition, it did not contain shoreline detail along major bodies of water such as the Atlantic and Pacific oceans, the Gulf of Mexico or the Great Lakes areas.

To address the inclusion of these water features into the Claritas boundaries, all census blocks with zero (0) land area and non-zero water area (in square meters), zero (0) population, and zero (0) housing units were identified and screened out. This resulted in the removal of selected census geographies and boundaries from the Claritas rosters:

GEOGRAPHY	NUMBER REMOVED
Block	543,099
Block Group	558
Tract	318
County Subdivision*	92
Place	0

Note 1: A total of 14 water blocks were maintained in the Claritas roster so as not to eliminate two county subdivisions comprised entirely of water blocks: one in Maine (2300357936, Penobscot Indian Island Reservation) and one in New York (3601314072, Chautauqua Lake UT (unorganized territory)).

Note 2: For additional information on census geography, terminology, land and water area in the TIGER/Line files, etc., refer to the Census Bureau's PL94-171 or SF1 documentation:

https://www.census.gov/prod/cen2010/doc/pl94-171.pdf

https://www.census.gov/prod/cen2010/doc/sf1.pdf

BOUNDARIES

TomTom MultiNet Administrative Areas block boundaries were processed to arrive at a set of block boundaries corresponding to the Claritas block roster without water blocks.

Block boundaries were then generalized to reduce cartographic detail and file sizes, and aggregated to higher levels of geography (block group, tract, state, county and country).

Block Group

Block group boundaries were aggregated from block boundaries. Some additional water detail was removed, e.g., water features that were entirely internal to a block group. Some additional generalization was performed.

Tract

Tract boundaries were aggregated from block group boundaries. Some additional water detail was removed, e.g., water feature that were entirely internal to a tract. Some additional generalization was performed.

Counties

County boundaries were aggregated from block boundaries (including all water blocks). With the exception of a few large water bodies (Great Salt Lake, UT and Lake Okeechobee, FL), there is no internal water detail in the county boundaries. The county boundaries include shoreline detail, e.g. along the Atlantic, Pacific, Gulf of Mexico and Great Lakes areas.

State

State boundaries were aggregated from county boundaries. With the exception of a few large water bodies (Great Salt Lake, UT and Lake Okeechobee, FL), there is no internal water detail in the state boundaries. The state boundaries include shoreline detail, e.g. along the Atlantic, Pacific, Gulf of Mexico and Great Lakes areas.

Country

Country (United States) boundary was aggregated from State boundaries. With the exception of a few large water bodies (Great Salt Lake, UT and Lake Okeechobee, FL), there is no internal water detail in the United States boundary. The United States boundary includes shoreline detail, e.g. along the Atlantic, Pacific, Gulf of Mexico and Great Lakes areas.

County Subdivision (MCD/CCD)

County subdivision boundaries were aggregated from block boundaries (including all water blocks). With the exception of a few large water bodies (Great Salt Lake, UT and Lake Okeechobee, FL), there is no internal water detail in the county subdivision boundaries. The county subdivision boundaries include shoreline detail, e.g., along the Atlantic, Pacific, Gulf of Mexico and Great Lakes areas.

Place

Place boundaries were aggregated from block boundaries (including all water blocks). With the exception of a few large water bodies (Great Salt Lake, UT and Lake Okeechobee, FL), there is no internal water detail in the place boundaries. The place boundaries include shoreline detail, e.g. along the Atlantic, Pacific, Gulf of Mexico and Great Lakes areas.

Note: Place boundaries in the TomTom MultiNet Administrative Areas product do not cover 100 percent of U.S. geography, reflecting the fact that the U.S. Census Bureau does not assign a place designation to all geography or land area of the U.S. In addition, places beyond -180° were not included in the TomTom MultiNet file. This affects the unincorporated place of Attu Station, AK.

Claritas did add the place of Attu Station, AK (0204670) in the Claritas roster.

DMA

Nielsen DMA boundaries are aggregated from county, using a custom boundary file created by Claritas, which includes a coding scheme to deal with split county DMA regions. While the majority of DMA regions are defined by whole counties, a small subset of counties nationwide is allocated (split) to multiple DMA regions. In general, the roster of split county DMA regions remains constant over time. The last introduction of a new split county was in 1998, in conjunction with the creation of DMA 747: Juneau Plus in Alaska. In the event of a new split county DMA, Nielsen's "Table of Geographic Split Counties by ZIP Code" is utilized to adjust the custom boundary file used as the source for aggregation to DMA.

5-Digit ZIP code

Source is TomTom MultiNet Post Enhancements product. Postal district (5-Digit ZIP Code) boundaries are generalized by Claritas to reduce cartographic detail and file sizes.

Metropolitan Areas

Metropolitan area (metropolitan and micropolitan core-based statistical areas and combined statistical areas [groupings of CBSAs]) boundaries are created using a generalized county boundary file and metropolitan area definitions from OMB. These sources are used to create county to core-based statistical area, and county to combined statistical area correspondence files. These correspondence files are then used to aggregate county boundaries to core-based statistical areas and combined satistical areas. Metropolitan areas do not cover the entire area of the United States.