

1. Introduction

1.1 What is a Shapefile?

A shapefile is a geospatial data format for use in geographic information system (GIS) software. Shapefiles spatially describe vector data such as points, lines, and polygons, representing, for instance, landmarks, roads, and lakes. The Environmental Systems Research Institute (Esri) created the format for use in their software, but the shapefile format works in additional Geographic Information System (GIS) software as well.

1.2 What are TIGER/Line Shapefiles?

The TIGER/Line Shapefiles are the fully supported, core geographic product from the U.S. Census Bureau. They are extracts of selected geographic and cartographic information from the U.S. Census Bureau's Master Address File/Topologically Integrated Geographic Encoding and Referencing (MAF/TIGER) database. The shapefiles include information for the fifty states, the District of Columbia, Puerto Rico, and the Island areas (American Samoa, the Commonwealth of the Northern Mariana Islands, Guam, and the United States Virgin Islands). The shapefiles include polygon boundaries of geographic areas and features, linear features including roads and hydrography, and point features. They do not contain any sensitive data.

1.3 What are the 2020 Prototype Shapefiles?

The 2020 Prototype Shapefiles are a version of the TIGER/Line shapefiles for Providence County, RI created specifically for use by states to help them prepare for redistricting in 2020. These shapefiles are released in support of the Redistricting Data Prototype Public Law (P.L. 94-171) summary file. The Prototype Shapefiles represent geographic area, linear, and point features such as roads, railroads, rivers, non-visible legal, statistical, and administrative boundaries, and selected features such as hospitals and parks. The files also contain attribute information about these features, such as names, the type of feature, address ranges for most streets, the geographic relationship to other features, and other related information. The Redistricting Data Prototype DVD contains shapefiles for Providence County, RI. The 2020 Redistricting Shapefiles will include data for all 50 states, the District of Columbia and the Commonwealth of Puerto Rico.

The Prototype Shapefiles contain Census 2010 and 2018 geography used for the creation of the prototype P.L. 94-171 summary file. This will allow the state redistricting officials to import this Census Bureau's geographic data into their redistricting and geographic information systems prior to receipt of that prototype P.L. 94-171 data. The Prototype Shapefiles are in the format planned for the 2020 Redistricting Shapefiles.

1.4 Relationship of Census Shapefiles to Census Statistical Data

The TIGER/Line Shapefiles contain a standard geographic identifier for each entity that links to the geographic identifier in the data from censuses and surveys. They do not include demographic data from surveys and censuses, such as the Decennial Census, Economic Census, American Community Survey, and the Population Estimates Program. Other, non-census, data often have this standard geographic identifier as well. Data from many of the Census Bureau's surveys and censuses, including the geographic codes needed to join to the TIGER/Line Shapefiles, are available in American FactFinder (<https://factfinder2.census.gov>). For more information regarding the geographic entity codes, please refer to Section 2.2.7 Codes for Geographic Entities.

In addition to the TIGER/Line Shapefiles, the Census Bureau creates additional shapefiles and geodatabases that include demographic data. These are an as-is products and are created by Census Bureau staff as time permits. All shapefiles and geodatabases with demographic data are available at: <https://www.census.gov/geo/maps-data/data/tiger-data.html>.

1.5 Geographic Limitations of the 2020 Prototype Shapefiles

The Prototype Shapefiles are based on the tabulation geography that was created for the Census Bureau's 2018 End-to-End Census Test in Providence County, RI. Therefore, the geographic extent of the Redistricting Prototype shapefiles is limited to those entities that existed in Providence County, RI in 2018. As a result, the Redistricting Prototype does not contain every type of shapefile that will be included in the 2020 Redistricting Data delivery because not every type of entity exists in Providence County, RI. This document provides details about the structure and naming conventions of all anticipated 2020 geographic entity files, even if a shapefile does not exist for a particular entity type on the Redistricting Data Prototype DVD. Geographic entities that cross the Providence County line, such as state, are clipped to the Providence County boundary in these files.

1.6 History and Sources of TIGER/Line Files and Shapefiles

The first release of the TIGER/Line Files was in 1989. These files provided the first nationwide street centerline coverage of the United States, Puerto Rico, and the Island Areas in a series of ASCII format fixed tables or record types. Initially, the Census Bureau used the U.S. Geological Survey (USGS) 1:100,000-scale Digital Line Graph (DLG), USGS 1:24,000-scale quadrangles, the Census Bureau's 1980 geographic base files (GBF/DIME Files), and a variety of miscellaneous maps for selected areas outside the contiguous 48 states to create the TIGER database (predecessor to the current MAF/TIGER database). The Census Bureau released versions of the TIGER/Line Files periodically throughout the 1990s and 2000s in ASCII format. Beginning with the 2007 version, the format of the TIGER/Line Files changed from the ASCII file format to shapefile.

The Census Bureau continually makes additions and corrections to its database, mainly through partner supplied data, the use of aerial imagery, and fieldwork. The Census Bureau has numerous partner programs where federal, state, and local government partners' supply updates to boundaries, features, and addresses. In the 2000's, the Census Bureau underwent a major realignment of the TIGER database to improve the spatial accuracy of the road network. Since this realignment, the Census Bureau has added quality standards for data sources used to update the MAF/TIGER database.

1.7 TIGER/Line Shapefile Legal Disclaimers

No warranty, expressed or implied, is made with regard to the accuracy of the data in the TIGER/Line Shapefiles, and no liability is assumed by the United States Government in general, or the Census Bureau specifically, as to the positional or attribute accuracy of the data. The boundary information in the TIGER/Line Shapefiles is for statistical data collection and tabulation purposes only. Their depiction and designation for statistical purposes does not constitute a determination of jurisdictional authority or rights of ownership or entitlement and they are not legal land descriptions.

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1.8 Contact and Citation Information

For more information concerning the content of the Redistricting Data Prototype Shapefiles contact:

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