U.S. DEPARTMENT OF EDUCATION

Education Demographic and Geographic Estimates (EDGE) Program

Composite School District Boundaries File Documentation

ies NATIONAL CENTER FOR EDUCATION STATISTICS
Institute of Education Sciences

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Contents

1.0 Composite School District Boundaries

The NCES Composite School District Boundaries combine the boundaries of the U.S. Census Bureau's Topologically Integrated Geographic Encoding and Referencing (TIGER) school district layers (Administrative, Elementary, Secondary, and Unified) into a single file. This simplifies the task of linking school district boundaries with other types of school district data by eliminating the need to join data to multiple boundary files. It also simplifies district-level mapping by providing wall-to-wall school district geographic coverage for all U.S. territory in a single file and by clipping the boundaries to the U.S. shoreline. This school district boundary file was developed from geographic shapefiles created by the U.S. Census Bureau and made available for download by the U.S. Department of Education's National Center for Education Statistics (NCES) through its Education Demographic and Geographic Estimates (EDGE) program.

The TIGER Elementary and Unified district boundaries are mutually exclusive, and the combination of the two exhausts the full extent of the United States, Puerto Rico, and the Island Areas (American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, and U.S. Virgin Islands). Secondary and Elementary districts are not mutually exclusive. Most Elementary district boundaries overlap Secondary district boundaries. Although the composite school district file includes all records for both Elementary and Secondary districts, the two types of districts are difficult to visualize at the same time because they often share boundaries. Because Elementary districts are more common than Secondary districts, the composite file places Elementary district boundaries on top of Secondary district boundaries by default.

Administrative school districts provide administrative, planning, and educational services for all grade ranges. Currently, the Census Bureau maintains administrative school districts only in Vermont, and they represent supervisory unions and supervisory districts.

2.0 School District Overview

For the purpose of the school district boundary file, school districts are geographic entities and single-purpose governmental units that operate schools and provide public educational services at the local level. The Census Bureau collects school district boundaries to develop annual estimates of children in poverty to help the U.S. Department of Education determine the annual allocation of Title I funding to states and school districts. NCES also uses the school district boundaries to develop a broad collection of district-level demographic estimates from the Census Bureau's American Community Survey (ACS). The Census Bureau updates school district boundaries, names, local education agency codes, grade ranges, and school district levels based on information provided by state education officials.

2.1 Universe

The U.S. has more than 13,000 geographically defined public school districts. These include districts that are administratively and fiscally independent of any other government, as well as public school systems that lack sufficient autonomy to be counted as separate governments and are classified as a dependent agency of some other government—a county, municipality, township, or state. Most public school systems are Unified districts that operate regular, special, and/or vocational programs for children in Pre-Kindergarten/Kindergarten (PK/KG) through 12th grade.

The Census Bureau's school district universe is a subset of the larger NCES Common Core of Data (CCD) Local Education Agency (LEA) universe. The Census collection is limited to regular districts that are geographically defined, and it excludes non-operating districts, independent charter school districts, and educational service agencies that are part of the CCD LEA universe. These districts primarily exist to collect and transfer tax revenue to other school systems that actually provide the education services, or to provide regional special education services, vocational education programs, or financial services for member districts.

2.2 Structure

The Census Bureau assigns all territory in the United States, Puerto Rico, and the Island Areas to one or more Unified, Elementary, or Secondary school districts based on the general grade range of the schools operated by the district. For example, a district that operates a complete grade range (PK-12 or KG-12) is assigned as Unified, while a district that operates schools for children only in grades KG-8 is classified as Elementary. Elementary and Secondary districts may serve the same territory and have overlapping boundaries, but they are not permitted to overlap boundaries of Unified districts except in the cases of Hawaii and New York City. The Census Bureau depicts the State of Hawaii as one Unified school district and the five counties that represent the five boroughs of New York City as one Unified school district.

The structure of school district geography varies by state and region, and districts that share the name of a county, city, or town, or operate schools for these areas may or may not be coterminous with the governmental unit. Districts in the Mid-Atlantic and New England states tend to follow county, township, or city boundaries, while districts in the Midwest, Great Plains, and Western states are generally independent of other municipal boundaries. Likewise, district boundaries may also cross boundaries for other statistical geographies like Urban Areas, Metropolitan Areas, Zip Code Tabulation Areas, Census Tracts, and Block Groups.

2.3 Grade Range and Direct Instruction

Although school district classifications (Administrative, Elementary, Secondary, or Unified) generally reflect the grade range of schools operated by a district, Census school district classifications are based on the grade range for which the school district is financially responsible, which may or may not be the grade range for which a school district provides direct instruction. For example, Elementary districts typically share territory with one or more Secondary districts that are responsible for operating schools for children in the upper grades. However, some Elementary districts are financially responsible for providing education for all grades, even though the district only operates schools that serve the elementary grades. In these cases, the Elementary district typically contracts with one or more nearby Secondary districts to provide educational services for children in the upper grades. A typical case would be a school district that operates schools for children in grades KG-8, and pays a neighboring school district to educate children in grades 9-12. The Elementary district is operationally responsible for grades KG-8, and is therefore classified as an Elementary district. However, since the district is financially responsible for all grades, the Census Bureau would define the grade range for the district as KG-12.

2.4 Pseudo School Districts

In addition to regular functioning school districts, the TIGER shapefiles also contain about 100 records for pseudo school districts. These supplemental geographic records are used to address situations where a district may operate different grade spans in different parts of the district. For example, a county may operate schools to serve grades K-12 throughout the county, except in a portion of the county where a city operates a separate K-8 district. Within the territory overlapping the city, the county only operates schools that serve 9-12. District boundary records are not designed to reflect multiple grade spans, so in these cases a separate pseudo secondary district would be created to account for the territory in the county coterminous with the city that only functions for grades 9-12. Although pseudo districts are not functioning districts, they are administratively necessary to help the Census Bureau allocate children for educational program purposes.

A list of pseudo districts and their codes appear in an Appendix of the TIGER Technical Documentation.

3.0 File Source Information

The boundary file provides a single composite layer that includes all school districts in the United States, Puerto Rico, and the Island Areas. The geography boundary file is derived from the Census Bureau's TIGER database. Elementary, Secondary, and Unified school district boundaries represent the current school year identified in the shapefile name and SCHOOLYEAR attribute.

3.1 Content, Vintage, and Scope

The TIGER database includes decennial Census geography and current geography for the United States, Puerto Rico, and the Island Areas. Current geography is defined as the latest version of the geographic extent of legally defined geographic areas as reported, generally reflecting the boundaries of governmental units in effect as of January 1st, or legal and statistical area boundaries that have been adjusted and/or corrected since the last decennial Census. This vintage enables users to see the most current boundaries of governmental units that match the data from the surveys that use the geography, such as the Population Estimates and the American Community Survey. The features in this release reflect updates that were made in the Master Address File (MAF) and TIGER database through May of this TIGER year.

The TIGER database reflects legal areas that may include water bodies, like territorial sea (which has a 3-mile limit) and the Great Lakes. The composite layer was clipped to the U.S. shoreline using a layer created by combining data from the TIGER coastline boundary and the Homeland Security Infrastructure Program state boundary file.

3.2 Spatial Data Format

The Census Bureau distributes school district boundaries formatted as shapefiles, a common standard for representing spatial data in points, lines, and polygons. The Census Bureau's annual TIGER database provides separate geographic layers for Unified, Elementary, and Secondary districts. The district boundary files rely on the five-digit NCES LEAID code as a unique district identifier within states, and in most cases the code sequence corresponds to the alphabetical order of district names within a state. However, changes over time with school district restructuring and consolidation in states have introduced some exceptions. The value 99997 is the school district code assigned to water or land where no official school district is defined by a state.

3.3 Boundary Changes

The TIGER boundaries for Elementary, Secondary, and Unified school districts are collected through a survey of state education officials under the auspices of the U.S. Department of Education's National Center for Education Statistics (NCES).

3.4 Spatial Accuracy

The Census Bureau uses various internal and external processes to update the MAF/TIGER database and maintain the currency of TIGER boundaries. While it has made a reasonable and systematic attempt to gather the most recent information available about the features in this file, the Census Bureau cautions users that the files are no more complete than the source documents used in their compilation, the vintage of those source documents, and the translation of the information on those source documents.

3.5 Sources of Geographic Data

The Census Bureau obtains data from numerous sources to update the TIGER database. 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, 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 makes additions and corrections to its database mainly through partner supplied data (federal, state, local, and private partners), 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. The Census Bureau underwent a major realignment of the TIGER database in the 2000's 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.

4.0 File Structure and Format

4.1 Structure, Format, Naming Conventions

The composite school district boundaries are offered in a compressed ZIP format. A shapefile is a collection of files with separate functions and suffixes that operate together.

The name of the file is: SCHOOLDISTRICT_SYYYYY_TLYY.<ext>

Where:

SCHOOLDISTRICT = general descriptor for type of geography
SYYYYY = school year
TLYY = TIGER shapefile year
<ext> = the file extension:

- .shp – The .shp file contains information about feature geometry and encapsulates information for all of the vertices needed to construct the locale polygon.
- .dbf – The .dbf file is a table that provides attributes for each feature. The table contains a unique record for each feature identified in the .shp file.
- .shx – The .shx file provides an index that supports the link between feature geometry and table attributes.
- .prj – The .prj file specifies the spatial coordinate system applied to the features. It identifies how the features are referenced and centered relative to an ellipsoidal representation of the earth.
- .shp.xml – The .shp.xml file contains metadata about the shapefile.
- .sbn – The .sbn and .sbx files are additional index files that divide features into regions to improve processing efficiency.
- .cpg – The .cpg file defines the character encoding used fo the .dbf file.

4.2 Datum

All Census Bureau generated shapefiles are in Global Coordinate System North American Datum of 1983 (GCS NAD83). The .prj file contains the following projection specification:

GEOGCS["GCS_North_American_1983",DATUM["D_North_American_1983",SPHEROID["GRS_1980"
,6378137,298.257222101]],PRIMEM["Greenwich",0],UNIT["Degree",0.01745329251994329 5]]

4.3 Metadata

The composite school district shapefile includes metadata that describe various characteristics about data quality, purpose, spatial extent, publication date, attribute descriptions, valid field values, and various other features. The metadata file is provided in Extensible Markup Language (XML) format, the Federal Geographic Data Committee's (FGDC) Content Standard for digital geospatial metadata.

5.0 Record Layout

Composite School District Shapefile Record Layout for SCHOOLDISTRICT_SYYYYY_TLYY

Field	Length	Type	Description
STATEFP	2	String	State FIPS code
ELSDLEA	5	String	Elementary school district local education agency code. ELSDLEA is a unique identifier within the state and is the last five digits of the GEOID.
SCSDLEA	5	String	Secondary school district local education agency code. SCSDLEA is a unique identifier within the state and is the last five digits of the GEOID.
UNSDLEA	5	String	Unified school district local education agency code. UNSDLEA is a unique identifier within the state and is the last five digits of the GEOID.
SDADMLEA	5	String	Administrative school district local education agency code (Vermont only). SDADMLEA is a unique identifier within the state and is the last five digits of the GEOID.
GEOID	7	String	School district identifier; a concatenation of the current state FIPS code and school district local education agency code. The GEOID is consistent with the NCES LEAID except in the case of pseudo-districts.
NAME	100	String	School district name
LSAD	2	String	Legal or statistical area description, currently 00 for all school districts.
LOGRADE	2	String	Lowest grade covered by the school district.
HIGRADE	2	String	Highest grade covered by the school district.
MTFCC	5	String	MAF/TIGER Feature Class Code: G5400=Elementary School District, G5410=Secondary School District, G5420=Unified School District, G5430=Administrative School District
SDTYP	1	String	School district type: A=Pseudo, B=DoD, C=Interstate, D=BIA, E=Same Name
FUNCSTAT	1	String	Functional status: E=Active government providing special-purpose functions, F=Fictitious Entity created to fill the Census Bureau geographic hierarchy
ALAND	14	Number	Land area (square meters)
AWATER	14	Number	Water area (square meters)
INTPTLAT	11	String	Latitude of the internal point
INTPTLON	12	String	Longitude of the internal point
GEO_YEAR	4	String	TIGER year
SCHOOLYEAR	9	String	Academic year