



National Center for Education Statistics  
U.S. Department of Education

# **Composite School District Boundaries**

## **Technical Documentation**

Education Demographic and Geographic  
Estimates (EDGE) Program



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## Contents

|            |   |          |
|------------|---|----------|
| <b>1.0</b> | <b>COMPOSITE SCHOOL DISTRICT BOUNDARIES .....</b> | <b>1</b> |
| <b>2.0</b> | <b>SCHOOL DISTRICT OVERVIEW .....</b>             | <b>1</b> |
| 2.1        | Universe.....                                     | 1        |
| 2.2        | Structure.....                                    | 2        |
| 2.3        | Grade Range and Direct Instruction .....          | 2        |
| 2.4        | Pseudo School Districts .....                     | 2        |
| <b>3.0</b> | <b>FILE SOURCE INFORMATION.....</b>               | <b>3</b> |
| 3.1        | Content, Vintage, and Scope .....                 | 3        |
| 3.2        | Spatial Data Format.....                          | 3        |
| 3.3        | Boundary Changes.....                             | 3        |
| 3.4        | Spatial Accuracy.....                             | 4        |
| 3.5        | Sources of Geographic Data .....                  | 4        |
| <b>4.0</b> | <b>FILE STRUCTURE AND FORMAT.....</b>             | <b>4</b> |
| 4.1        | Structure, Format, Naming Conventions.....        | 4        |
| 4.2        | Datum .....                                       | 4        |
| 4.3        | Metadata .....                                    | 5        |
| <b>5.0</b> | <b>RECORD LAYOUT .....</b>                        | <b>5</b> |

## **1.0 COMPOSITE SCHOOL DISTRICT BOUNDARIES**

The NCES Composite School District Boundary file combines Elementary, Secondary, Unified, and Administrative school district boundaries collected for NCES by the U.S. Census Bureau into a single composite boundary file. The Census Bureau stores the boundaries as separate layers in its Topologically Integrated Geographic Encoding and Referencing (TIGER) database due to topological restrictions. The composite boundary file, created by the National Center for Education Statistics' Education Demographic and Geographic Estimates (EDGE) program, simplifies the task of linking school district boundaries with other school district data by eliminating the need to repeatedly join a district data table to multiple boundary files. It also simplifies district-level mapping by providing complete geographic coverage for all U.S. territory in a single file, and by clipping the boundaries to the U.S. shoreline.

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. Elementary districts are more common than Secondary districts, so 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**

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 for NCES to support spatial analytic needs and to develop estimates of district-level social and economic conditions. For example, the boundaries are used to develop poverty estimates to support Title I of the Elementary and Secondary Education Act, as well as large collections of social, economic, demographic, and housing characteristics from the American Community Survey (ACS). The boundaries are updated annually, along with district names, state and federal unique identifiers, grade ranges, and other characteristics based on information provided by state education officials.

### **2.1 Universe**

The United States 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 another government—a county, municipality, 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 12<sup>th</sup> grade.

The TIGER school district universe is a subset of the larger collection of local education agencies (LEA) maintained in the NCES Common Core of Data (CCD). The TIGER collection is limited to regular districts that are geographically defined, and it excludes non-operating districts, independent charter school districts, and education service agencies that are all included in the CCD LEA universe. These districts primarily exist to collect and transfer tax revenue to other school systems that provide direct education

services, or to provide regional special education services, vocational education programs, or financial services for member districts.

## **2.2 Structure**

TIGER 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 share the boundary and 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. Additional information about the spatial associations between school districts and other geographic areas is available in the EDGE [Geographic Relationship File \(GRF\)](#) collection.

## **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, TIGER 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. The TIGER database is 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 or legal entities, they are administratively necessary to help the Census Bureau allocate population for education 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 NCES EDGE composite boundary file provides a single layer that includes all school districts for all grade levels in the United States, Puerto Rico, and the Island Areas. The NCES composite file is derived from district layers in the TIGER database. Elementary, Secondary, Unified, and Administrative 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 1<sup>st</sup>, 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 the specified 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 EDGE composite boundary 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's Geography Division distributes school district boundaries in a variety of formats including shapefiles, a common standard for representing spatial data in points, lines, and polygons. The Census Bureau's annual TIGER/Line collection provides separate geographic layers for Elementary, Secondary, Unified, and Administrative 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 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 Census Bureau's Geography Division conducts an annual survey for NCES through its School District Review Program (SDRP) to collect, review, and update school district boundaries from each state. The Census SDRP staff contact state education officials and work with designated state mapping coordinators to capture a complete set of geographically-defined districts for each state and to identify local-level boundary changes between districts and potential changes in district inventories due to consolidations or the creation of newly qualifying districts.

### 3.4 Spatial Accuracy

The Census Bureau's Geography Division 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's Geography Division 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). Census staff make continuous additions and corrections to its database through partner supplied data (federal, state, local, and private partners), the use of remotely sensed imagery, and fieldwork.

## 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 an industry standard format that uses a collection of files with separate functions to store geographic information and feature attributes.

The name of the file is: EDGE\_SCHOOLDISTRICT\_TLYY\_SYYYY.<ext>

Where:

SCHOOLDISTRICT = general descriptor for type of geography

TLYY = TIGER shapefile year

SYYYY = school 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 points and polygons.
- *.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.
- *.cpg* – The *.cpg* file defines the character encoding used for 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",0.017453292519943295]]
```

### 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 EDGE\_SCHOOLDISTRICT\_TLYY\_SYYYY

| Field      | Length | Type   | Description   |
|------------|--------|--------|---|
| STATEFP    | 2      | String | State FIPS code   |
| ELSDLEA    | 5      | String | Current elementary school district local education agency code. ELSDLEA is a unique identifier within state and is the last five digits of GEOID.   |
| SCSDLEA    | 5      | String | Current secondary school district local education agency code. SCSDLEA is a unique identifier within state and is the last five digits of GEOID.  |
| UNSDLEA    | 5      | String | Current unified school district local education agency code. UNSDLEA is a unique identifier within state and is the last five digits of GEOID.  |
| SDADMLEA   | 5      | String | Current administrative school district local education agency code (Vermont only). SDADMLEA is a unique identifier within state and is the last five digits of 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 | Current school district name  |
| LSAD       | 2      | String | Legal or statistical area description, currently 00 for all school districts  |
| LOGRADE    | 2      | String | Current lowest grade covered by school district   |
| HIGRADE    | 2      | String | Current highest grade covered by 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 | Current school district type: A=Pseudo, B=DoD, C=Interstate, D=BIA, E=Same Name   |
| FUNCSTAT   | 1      | String | Current functional status: E=Active government providing special-purpose functions, F=Fictitious Entity created to fill the Census Bureau geographic hierarchy.   |
| ALAND      | 14     | Number | Current land area   |
| AWATER     | 14     | Number | Current water area  |
| INTPTLAT   | 11     | String | Current latitude of the internal point  |
| INTPTLON   | 12     | String | Current longitude of the internal point   |
| GEO_YEAR   | 4      | String | Current TIGER year  |
| SCHOOLYEAR | 9      | String | Current academic year   |