

2009 COMPOSITE SCHOOL DISTRICT SHAPEFILES: TECHNICAL DOCUMENTATION

## **1.0 Abstract: 2009 Composite School District Shapefile**

### Data Type

Geography boundary file derived from the Census Bureau's 2009 TIGER\Line database.

### Data Content

Elementary, Secondary, and Unified school district boundaries representing the 2007-2008 school year. The boundary file provides a single composite layer that includes all school districts in the United States, Puerto Rico, and U.S. Island Areas.

### Data Availability

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 program.

## **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 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. The Census Bureau updates school district boundaries, names, local education agency codes, grade ranges, and school district levels biennially based on information provided by state education officials.

### 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 12<sup>th</sup> 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 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.

### Structure

The Census Bureau assigns all territory in the U.S., 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<sup>th</sup> or K-12<sup>th</sup>) is assigned as Unified, while a district that operates schools for children only in grades KG-8<sup>th</sup> 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 for Unified districts.

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 cross boundaries for other statistical geographies like Urban Areas, Metropolitan Areas, Zip Code Tabulation Areas, Census Tracts, and Block Groups.

#### Grade Range and Fiscal Responsibility

Although school district classifications (Elementary, Secondary, or Unified) generally reflect the grade range of schools operated by 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 that a school district operates. 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 K-8<sup>th</sup>, and pays a neighboring school district to educate children in grades 9<sup>th</sup>-12<sup>th</sup>. The Elementary district is operationally responsible for grades K-8<sup>th</sup>, 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<sup>th</sup>.

#### Spatial Data Format

The Census Bureau distributes school district boundaries formatted as shapefiles, a common industry standard for representing spatial data in points, lines, and polygons. Separate files are provided for Unified, Elementary, and Secondary districts. These data are released annually as geographic layers in the Census Bureau's TIGER/Line database. 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 from the biennial district review program have introduced some exceptions. The code value 99998 is used for some large bodies of water and 99997 is assigned to land where no official school district is defined by a state.

#### Pseudo Districts

In addition to regular functioning school districts, the TIGER/Line shapefiles also contain a small set of records for pseudo-school districts. These additional cases occur infrequently and 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<sup>th</sup> throughout the county, except in a portion of the county where a city operates a separate K-8<sup>th</sup> district. Within the territory overlapping the city, the county only operates schools that serve 9<sup>th</sup>-12<sup>th</sup>. District boundary files 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<sup>th</sup>-12<sup>th</sup>. Although pseudo-districts are not functioning districts, they are administratively necessary to help the Census Bureau allocate children for Title I purposes. Pseudo-districts occur in Arizona, California, Kentucky, Massachusetts, Oregon, South Carolina, Tennessee, and Texas, and their names reflect the functional associations between the two interacting districts. A list of these pseudo-secondary school districts and their codes appears in Appendix A below.

### **3.0 2009 Census Bureau TIGER/Line Shapefiles**

#### Content, Vintage, and Scope

The 2009 TIGER/Line Shapefiles contain 2000 Census geography and current geography for the United States, the District of Columbia, 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, 2009, or legal and statistical area boundaries that have been adjusted and/or corrected since the 2000 Census. This vintage enables users to see the most current boundaries of governmental units that match the data from the surveys that use 2009 geography, such as the 2009 Population Estimates and the American Community Survey. The features in this release reflect updates that were made in the MAF/TIGER database through May 2009.

### Boundary Changes

The 2009 TIGER/Line boundaries for Elementary, Secondary, and Unified school districts are collected through a biennial survey of state education officials under the auspices of the U.S. Department of Education's National Center for Education Statistics (NCES) and are current as of the 2007-2008 school year.

### Spatial Accuracy

The Census Bureau uses various internal and external processes to update the MAF/TIGER database and maintain the currency of TIGER/Line 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.

### Sources of Geographic Data

The Census Bureau obtains data from numerous sources to update the MAF/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 (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 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 Structure and Format**

### Composite Files

The 2009 Composite School District shapefile combines the boundaries of all TIGER/Line school districts (Elementary, Secondary, and Unified) into a single file, rather than three separate layers. 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. Likewise, it simplifies mapmaking by providing wall-to-wall school district geographic coverage for all U.S. territory in a single file.

The TIGER/Line Elementary and Unified district boundaries are mutually exclusive, and the combination of the two exhausts the full extent of the U.S., Puerto Rico, and the Island Areas. Secondary and Elementary districts are usually 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.

### Structure, Format, Naming Conventions

The 2009 composite school district boundaries are offered as a shapefile that is compressed into a ZIP file. The shapefile is a collection of six individual files with separate extensions that function together.

The name of each file is:

SCHOOLDISTRICT\_SY0708\_TL09.<ext>

Where:

SCHOOLDISTRICT = general descriptor for type of geography

SY0708 = School year 2007-2008

TL09 = original shapefiles were sourced from TIGER/Line 2009

<ext> = the file extension:

- .shp – the feature geometry
- .shx – the index of the feature geometry
- .dbf – the tabular attribute information
- .prj – the coordinate system information
- .sbn – the shape information in rectangles
- .shp.xml – the Federal Geographic Data Committee (FGDC) metadata

#### Datum (GCS NAD 83)

The composite shapefile includes a .prj file in the GIS industry standard well-known text (WKT) format that describes the coordinate system/projection/datum information for each shapefile. 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]]
```

#### Metadata

The composite school district shapefile includes metadata that describe various characteristics about data quality, purpose, spatial extent, attribute descriptions, valid field values, contact information, and various other features. The metadata file is compatible with a text editor, web browser, and common GIS applications, and is provided in Extensible Markup Language (XML) format, the Federal Geographic Data Committee's (FGDC) Content Standard for digital geospatial metadata (CSDGM) - shp.xml.

## RECORD LAYOUT

Composite School District Shapefile Record Layout for SCHOOLDISTRICT\_SY0708\_TL09

Field	Length	Type	Description
STATEFP	2	String	State FIPS code
SCSDLEA	5	String	Current secondary school district local education agency code
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
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
ELSDLEA	5	String	Current elementary school district local education agency code
UNSDLEA	5	String	Current unified school district local education agency code
GEOID	7	String	School district identifier; a concatenation of the current state FIPS code and school district local education agency code

## APPENDIX A - PSEUDO SCHOOL DISTRICTS

2007-2008 School District Review Program Pseudo-School Districts (stored as Secondary School Districts)

Column headers:

STATEFP      2009 state FIPS code  
 SDLEA        2009 secondary school district local education agency code  
 NAME         2009 secondary school district name

STATEFP	SDLEA	NAME
04	04001	Apache County High School District
04	04003	Cochise County High School District
04	04005	Coconino County High School District
04	04007	Gila County High School District
04	04009	Graham County High School District
04	04011	Greenlee County High School District
04	04013	Maricopa County High School District
04	04015	Mohave County High School District
04	04019	Pima County High School District
04	04021	Pinal County High School District
04	04023	Santa Cruz High School District
04	04025	Yavapai County High School District
06	06053	Gonzales Unified (Grades 9-12) School District
06	06107	Porterville Unified (Grades 9-12) School District
21	21001	Laurel County School District for East Bernstadt ISD
21	21002	Pulaski County School District for Science Hill ISD
21	21003	Elizabethtown Independent School District for West Point ISD
25	22222	Mohawk Regional School District in Hawley Town and Charlemont Town
25	25001	Somerset School District in Berkley (Grades 9-12)
25	25002	North Adams School District in Clarksburg (Grades 9-12)
25	25003	Gill-Montague School District in Erving (Grades 7-12)
25	25004	Southwick-Tolland School District in Granville (Grades 9-12)
25	25005	Swampscott School District in Nahant (Grades 7-12)
25	25006	Pittsfield School District in Richmond (Grades 9-12)
25	25007	Mohawk Trail School District in Rowe (Grades 7-12)
25	25008	Adams-Cheshire School District in Savoy (Grades 7-12)
25	25009	North Adams School District in Florida (Grades 9-12)
25	25010	Fairhaven-New Bedford School Districts in Acushnet (Grades 9-12)
25	25012	Nauset-Provincetown School Districts in Truro (Grades 7-12)
25	25013	Mount Greylock-New Lebanon (NY) School Districts in Hancock (Grades 7-12)
25	25014	North Adams School District in Monroe (Grades 9-12)
41	41034	Klamath Falls City Overlap Area
41	41035	Klamath County Overlap Area
45	45013	Beaufort County School District within Beaufort Marine Corps Air Station
45	45079	Richland County School District 02 within Fort Jackson
47	47001	Anderson County School District in Clinton
47	47029	Cocke County School District in Newport
47	47031	Coffee County School District in Manchester
47	47033	Crockett County School District in Alamo

47	47034	Crockett County School District in Bells
47	47073	Hawkins County School District in Rogersville
47	47077	Henderson County School District in Lexington
47	47079	Henry County School District in Paris
47	47103	Lincoln County School District in Fayetteville
47	47107	McMinn County School District in Athens
47	47108	McMinn County School District in Etowah
47	47123	Monroe County School District in Sweetwater
47	47143	Rhea County School District in Dayton
47	47149	Rutherford County School District in Murfreesboro
47	47187	Williamson County School District in Franklin
47	47189	Wilson County School District in Lebanon
48	48143	Stephenville ISD (Grades 9-12) in Bluff Dale
48	48285	Hallettsville ISD (Grades 9-12) in Vysehard
48	48355	Tuloso-Midway ISD (Grades 9-12) in London
48	48483	Wheeler-Shamrock-Samnorwood ISD (Grades 9-12) in Kelton