

## Proposed Spatial Data Standard for Arkansas School Board Zones

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### Introduction

The Arkansas Geographic Information Office (AGIO) has prepared this document for the purpose of establishing the technical specifications of the digital map for “detailing the election zone boundaries of the resulting district or receiving district” as stated in and pursuant to Section 11 of Act 1073 of the 89<sup>th</sup> Arkansas General Assembly. This section of Act 1073 is an amendment of Arkansas Code § 6-13-1417(b)(3)(C). It is hereby submitted to the Geographic Information Systems (GIS) Board for review.

### Purpose

Section 11 of Act 1073 states,

“No later than one hundred twenty (120) calendar days before the second school election following the effective date of the consolidation or annexation, file a digital map, in a format prescribed by the Arkansas Geographic Information Office, detailing the election zone boundaries of the resulting district or receiving district with the:

- (i) Secretary of State;
- (ii) Arkansas Geographic Information Office; and
- (iii) County clerk of each county that contains school district territory of each affected district, receiving district, or resulting district.”

The AGIO has developed the following data standard to satisfy the need for a prescribed format as stated above. Creators of the aforementioned digital map shall adhere to these specifications. The AGIO, acting at the direction of the Board, reserves the right to exercise review and quality control over data submittals to ensure adherence to this standard.

### Standard Specifications

#### Format

The deliverable shall include topologically correct polygon spatial data in shapefile format representing the school district or zone as well as the associated feature attribute table. (See Appendix A for a description of the required table schema.) Building topology and correcting any errors will require the use of data formats other than shapefiles, e.g. file geodatabases. The shapefile format was chosen as the deliverable format to facilitate the potential use of non-ESRI software platforms.

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## Coordinate System

The shapefile(s) shall use the UTM coordinate system, Zone 15 north, North American Datum 1983, and the units shall be meters.

## Topology

All new district or zone data shall be a topologically correct, seamless polygon data layer in a shapefile format covering the geographic extent of the school district. At a minimum, the following topology rules shall apply.

<u>Rule</u>	<u>Description</u>
Must Not Overlap	Requires that the interior of polygons in the feature class not overlap. The polygons can share edges or vertices. This rule is used when an area cannot belong to two or more polygons.
Must Not Have Gaps	This rule requires that there are no voids within a single polygon or between adjacent polygons. All polygons must form a continuous surface. An error will always exist on the perimeter of the surface. This error can be either ignored or marked as an exception.

Cluster tolerance for the topology will be not greater than one meter.

## Database Schema

In order to facilitate the efficient incorporation of school district updates into existing statewide district datasets, specific database schema shall be adhered to. Details for this schema can be found in Appendix A.

## Metadata

The data deliverable will be documented in accordance with Federal Geographic Data Committee (FGDC) Content Standard for Digital Geospatial Metadata Version 2 (FGDC-STD-001-1998).

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## Appendix A - District Polygon Attribute Table Schema

The following table illustrates the minimum attributes of the polygon features that shall be delivered with the district or zone polygons. Each value entered in an attribute table shall have a corresponding polygon and vice-versa.

### School Districts

Field Name	Type	Length	Description
LEA	Text	7	Stores the Arkansas Department of Education local education agency unique identifier
Unified	Text	5	Stores US Department of Education unique identifier
Name	Text	30	Stores the school district name
Zone	Text	5	Stores the zone number of the school board zone.
Edit_date	Date		Date the features were edited.
Edit_desc	Text	254	Description of the edits made to the feature.
Edit_src	Text	254	Source of edits made to the features, e.g. agency, county office, school district, consultant, etc.
Comment	Text	254	Additional explanatory comments pertinent to the feature.