

# Census Bureau Boundary Review Tools

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## Agenda

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- **What is BAS?**
  - BAS Overview
  - Participation Methods (Digital BAS, GUPS, Paper Maps)
- **Challenges conflating non-topological data into TIGER**
- **New update methods**
  - FUSS
  - CHEAPET
  - LISRDS
  - Standardization of data across the board
  - Python scripts do the heavy lifting
  - Human decision making is still the most vital piece of the process
  - Some technical details
- **Questions**

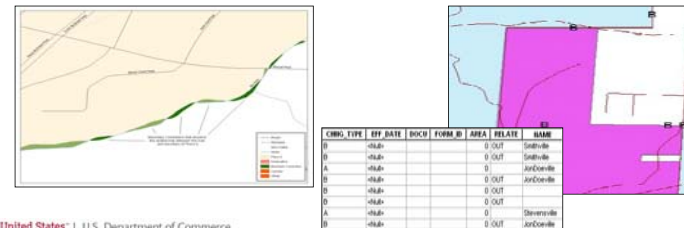
## What is BAS?

- Annual, voluntary survey to collection legal status and boundary updates for tribal, state, and local governments.
- Boundary updates submitted as part of the BAS must be legally in effect on or before January 1<sup>st</sup> of each BAS year.
- Boundary updates submitted March 1<sup>st</sup> are reflected in the American Community Survey and Population Estimates data.
- Boundary updates submitted by May 31<sup>st</sup> are reflected in the following year's BAS materials (digital files and paper maps)

## 2016 BAS - Participation Methods

### ▪ Digital BAS

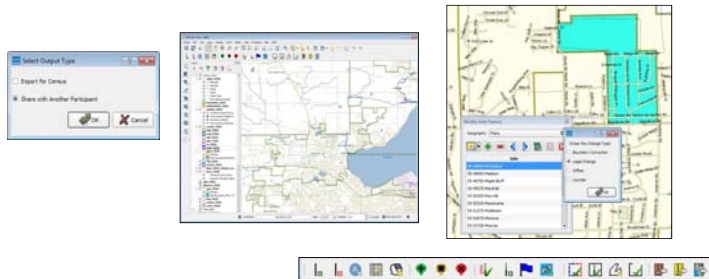
- Designed to accept submissions from experienced users of Geographic Information Systems (GIS) who have the ability to modify Census Bureau spatial data
- Spatial data provided in GIS shapefile format
- Goal is to provide governmental units the option to use a GIS to create BAS submission files and electronically submit the files to the Census Bureau



## 2016 BAS - Participation Methods

### ▪ GUPS

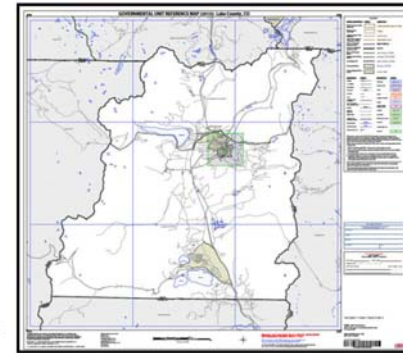
- GUPS is based on an open-source platform known as QGIS. It is a customized geographic information system (GIS) provided by the Census Bureau. GUPS is tailored to meet the needs of those without extensive GIS experience and replaces the MAF/TIGER Partnership Software (MTPS) previously used in BAS.



## 2016 BAS - Participation Methods

### ▪ Paper

- Paper BAS is designed for participants who prefer to update their boundary and attribute information on paper maps. Participants annotate their boundary, feature, and attribute changes on Census Bureau-provided paper maps.



## Challenges conflating non-topological data into TIGER

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- Topologically Integrated Geographic Encoding and Referencing system.
- Oracle topology

## New update methods

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- **FFUS**
- **CHEAPET**
- **LISRDS**

## FFUS

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- Fast Feature Update System

## CHEAPET

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### Census Headquarter Edit Area Polygon Equivalency Table

## LISRDS

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- Live Individual Shapefile Request and Delivery System (LISRDS) allows us to quickly view data in ArcGIS for comparison against external data sources

## Standardization of data across the board

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- Every unit of work has a project folder containing an identical data structure
- Every map is laid out the same.
- The feature classes used for reference when digitizing are the same that are used in QC.
- Data can be quickly found and interpreted later if any questions arise about the work completed on a given work unit.

## Python scripts do the heavy lifting

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## Human decision making is still the most vital piece of the process

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- Ultimately the reviewer looks at the same data and gets the same work done as before
- A reliable deliberation regarding the update of the TIGER database can only be completed by a knowledgeable professional.
- The key difference is that our knowledgeable professionals spend less time gathering materials and piecing together routine cartographic products.

## Some technical details

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## Questions?

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