

National Boundaries Group

Status Report

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Governmental Units and Administrative and Statistical Boundaries Theme

- Agency Lead: Department of Commerce, U.S. Census Bureau
- Theme Lead: Dierdre Bevington-Attardi
- Executive Champion: Timothy Trainor

Theme Definition

Boundaries that **delineate geographic areas** for uses such as governance and the general provision of services (e.g., States, American Indian reservations, counties, cities, towns, etc.), administration and/or for a specific purpose (e.g., Congressional Districts, school districts, fire districts, Alaska Native Regional Corporations, etc.), and/or provision of statistical data (e.g., census tracts, census blocks, metropolitan and micropolitan statistical areas, etc.).

Boundaries for these various types of geographic areas are either defined through a **documented legal description** or through **criteria and guidelines**.

Other boundaries may include:

- international limits;
- federal land ownership;
- administrative regions for various federal agencies; and
- jurisdictional offshore limits of U.S. sovereignty.

National Boundaries Group

Goals and Objectives:

- To coordinate federal agency collaboration on 41 National Geospatial Data Assets (NGDA) datasets pertaining to boundaries described in the group charter
- To prioritize the following measurements and quality standards for the maintenance of boundary data for the Governmental Units Theme to achieve:
 - Currency (how is it defined by responsible agency)
 - Accuracy (what is required by responsible agency)
 - Consistency (between agencies)
 - Accessibility (to federal agencies)
 - Integration (ability to use each other data without duplication)
- Co-chaired by the USGS and Census

Participating Agencies



- Bureau of Land Management
- U.S. Forest Service
- National Park Service
- U.S. Fish and Wildlife Service
- U.S. Geological Survey
- U.S. Census Bureau
- Bureau of Reclamation
- Bureau of Indian Affairs
- National Geospatial-Intelligence Agency
- U.S. Army Corps of Engineers
- Library of Congress
- Oak Ridge National Labs
- U.S. Department of Agriculture
- Bureau of Ocean Energy Management
- National Oceanic and Atmospheric Administration
- Environmental Protection Agency
- Department of Defense
- Department of Homeland Security
- International Boundary Commission
- International Boundary and Water Commission
- Federal Emergency Management Agency



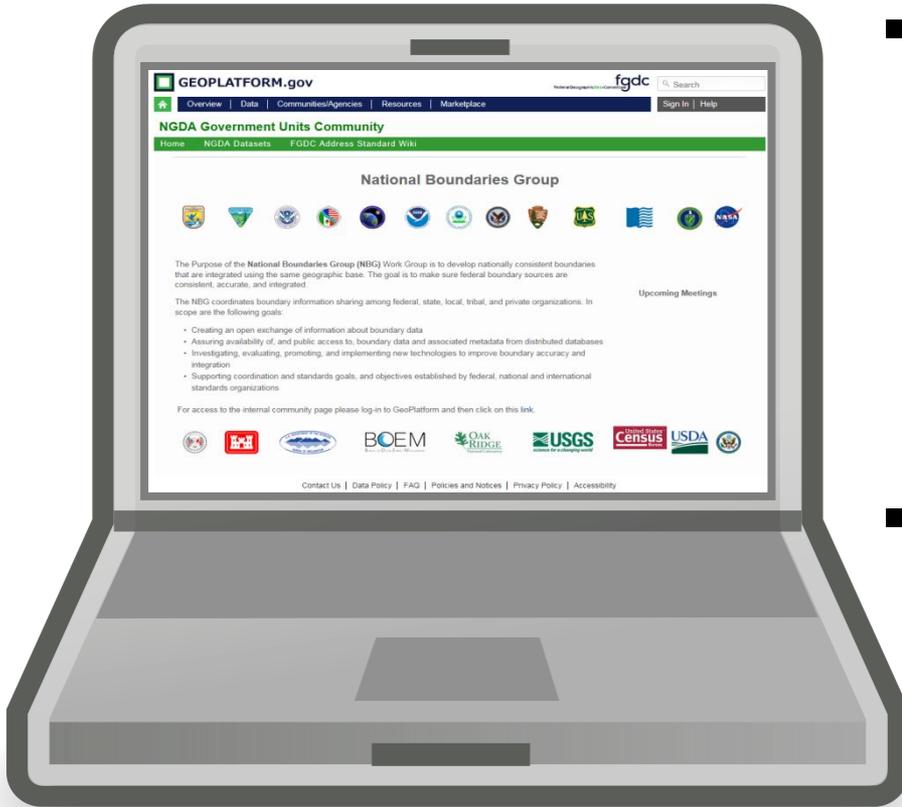
National Boundaries Group

Previous and Upcoming Meetings

- **First meeting held March 14, 2011**
 - Quarterly meetings starting in 2012
- **International Boundaries**
 - December 8th, 2015
- **Tribal Lands and Boundary Updates**
 - February 25th, 2016 ESRI Federal Users conference in Walter E. Washington Convention Center, Washington DC
- **Federal Lands and Governmental Units Strategic Theme Boundaries**
 - May 26th, 2016 Webinar
- **To be Announced**
 - November 2016 Webinar

National Boundaries Group

2016 Accomplishments



- Development of Community Page on FGDC's **GeoPlatform** as a space to share information, meeting minutes, presentations, blogs, and links
- Establishment and growth of subgroups
 - Federal Lands Working Group
 - Tribal Boundaries Subgroup
- Completion of the Governmental Units Theme 5-year Strategic Plan

National Boundaries Group

Accomplished 2016 Goals

- ✓ **Current, Accurate and Consistent Geospatial Data Quality**
 - Census Bureau updated their international boundaries with boundary data from international boundary commissions
 - Updated selected Governmental Unit National Geospatial Data Assets (NGDA) datasets through yearly geographic update programs.

- ✓ **Accessible Boundary Data**
 - Provide digital data such as shapefiles, geodatabases, and metadata through:
 - ✓ www.census.gov FTP site
 - ✓ TIGERweb viewer and as web map services
 - ✓ www.data.gov and www.geoplatform.gov
 - ✓ USGS “*The National Map*”

- ✓ **Integrated Boundaries**
 - National Boundaries Group and Census Bureau reviewed the federal lands to determine which lands are most appropriate to include in Census Bureau’s TIGER

National Boundaries Group

Challenges and Opportunities for 2017

- Lead and coordinate outreach to federal agencies that consume or produce data sets that define boundaries
- Reduce duplication of effort
- Increase the overall quality of shared boundary data
- Continue to participate in open forums and organized meetings for the exchange of ideas to improve the overall management of boundaries in NGDA data sets
- Identify new collaborative opportunities with tribal, federal, state, and local governments

Federal Lands Working Group

Objective and goals:

To develop a data standard and the organizational strategies for federally owned lands required to inventory federally owned lands and management designations.

- Publish aggregated federal lands geodatabase to meet common agency needs
- Identify and correct major boundary overlaps between agency datasets
- Review data standards
- Guide workflow and contacts



Federal Lands Working Group (FLWG)

Accomplished 2016 Goals

- ✓ Finalized Source Data Documentation for federal lands in the Protected Areas Database of the United States (PAD-US)
- ✓ Finalized and published a new version of PAD-US
 - USGS published PAD-US version 1.4 including the best available representation of federally owned lands and management designations, developed with the FLWG
- ✓ Finalized and published Core Attribute Standards
- ✓ Documented common agency needs for federal lands data and current applications
- ✓ Maintained monthly meetings and updated FLWG fact sheet

Federal Lands Working Group (FLWG)

Goals for 2017

- Automate the translation of authoritative source data into the PAD-US format
- Contribute to the next PAD-US update, published by USGS
- Assess and improve inventory completeness
- Assess and improve the compatibility of core attributes between agency datasets
- Identify and correct major boundary overlaps to produce a 'flat' federal land ownership file
- Share FLWG goals and accomplishments through outreach

Tribal Boundaries Subgroup

To provide a platform for different federal agencies and tribal governments to create a ***unified source of tribal boundary data*** and work together to identify how to disseminate data together

“Tribal Boundaries Subgroup” changed name from “Tribal Lands Subgroup” to more accurately describe the group’s purpose and activities

Tribal Boundaries Subgroup

Accomplished 2016 Goals

- ✓ Documented how agencies use tribal boundary data, what data quality is required, and what boundary attributes are needed
 - Created a presentation template and hosted presentations for the Census Bureau, Environmental Protection Agency, Bureau of Indian Affairs, Department of Energy, Federal Emergency Management Agency, and the National Park Service
- ✓ Scheduled monthly meetings
- ✓ Determined different agencies and governments' needs for accurate and consistent tribal lands data
- ✓ Discussed and documented tribal boundary needs from agencies that use tribal boundaries

Tribal Boundaries Subgroup

Goals for 2017

- Finalize subgroup Charter
- Post each agency's tribal boundary presentation along with other agency documentation on the Federal Geographic Data Committee geoportal
- Discuss ways that agencies can **collaborate**, **reduce duplication**, and **share** tribal boundary information
- Discuss and document **definitions** for types of tribal lands and boundaries
- Ensure that all work will be done in direct contact **with tribal governments**

Governmental Units and Administrative and Statistical Boundary Theme

Census Bureau's National Geospatial Data Assets (NGDA)

115th Congressional District	County Subdivision
2010 Census 5-digit ZIP Code Tabulation Area	Elementary School Districts
2010 Census Population & Housing Unit Counts	Estate (US Virgin Islands)
2010 Census Public Use Microdata Area	Metropolitan Division
2010 Census Urban Area	Metropolitan Statistical Area/Micropolitan Statistical Area (CBSA)
2010 Census Voting District	New England City and Town Area (NECTA)
2010 Census Urban Growth Area (UGA)	NECTA Divisions
Alaska Native Regional Corporation (ANRC)	Place
American Indian Tribal Subdivision	Secondary School District
American Indian/Alaska Native/Native Hawaiian (AIANNH) Areas	State and Equivalent
Block Group	State Legislative District (SLD) Lower Chamber
Census Block	State Legislative District (SLD) Upper Chamber
Census Bureau Regional Office Boundaries	Subbarrio (Sub-minor Civil Division)
Census Tract	Tribal Block Group
Combined New England City and Town Area	Tribal Census Tract
Combined Statistical Area (CSA)	Unified School Districts
Consolidated City	
County and Equivalent	

Governmental Unit, and Administrative and Statistical Boundary Theme

National Geospatial Data Assets

- Special Jurisdictions
- International
- Statistical
- Administrative
- Legal



Tippecanoe and Fountain Counties, IN survey marker.
Photo courtesy of Michael Ratcliffe 2015

Governmental Unit, and Administrative and Statistical Boundary Theme

National Geospatial Data Assets

Special Jurisdictions

- Regional Boundaries - Environmental Protection Agency (EPA)
- Regional Boundaries - Department of Housing and Urban Development (HUD)
- HUD Entitlement Grantee Jurisdiction
- Bureau of Land Management Administrative Boundaries (BLM)
- National Weather Service Forecast Boundaries (NOAA-NWS)

International Boundaries

National Boundaries Group

- National Boundaries Group coordinates with the international boundary commissions
 - International Boundary Commission (IBC)
 - United States and Canada
 - International Boundary and Water Commission
 - United States and Mexico



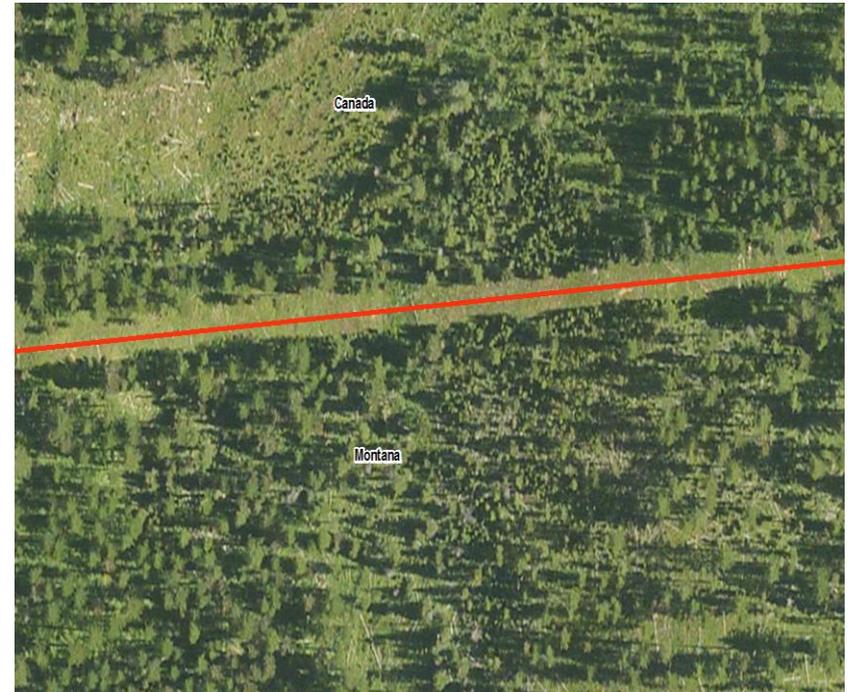
International Boundaries

International Boundary Commission (IBC)

United States and Canada

Goals and Objectives:

- Under international treaty, maintains the 8,891 km (5,525 miles) boundary shown on 256 official boundary maps
- Inspects, maintains and reestablishes the following:
 - over 8,000 monuments and reference points
 - 1,000 survey control stations
 - keeps a 6 meter or 20 foot wide clear vista along the land boundary line
- Provides shapefile of official map coordinates
 - <http://www.internationalboundarycommission.org/en/maps-coordinates/coordinates.php>



The US-Canada border is a swath of land cut through the forests, and is visible through imagery

International Boundaries

The International Boundary and Water Commission (IBWC)

United States and Mexico

Goals and Objectives:

- The Commission in 2014 established a baseline for a new boundary line, not yet adopted officially by both governments
- The 2014 boundary image maps have 2,500+ new updated images currently under review
 - Draft PDF maps available at www.ibwc.gov/GIS_Maps/GIS_Program.html and www.data.gov
- Goal is to release preliminary maps in 2017-2018



International Boundaries

National Boundaries Group

- In 2016, the International Boundary Commission (IBC) provided updates on the US-Canada border to the National Boundaries Group as they continue to improve the dataset
- Currently, the Census Bureau is working on incorporating the IBC boundary
 - In 2016, the Census Bureau:
 - Updated international boundaries for:
 - ✓ Washington
 - ✓ Idaho
 - ✓ New Hampshire
 - Notified each state official of the current IBC authoritative location
 - Started the notification to each county/local official of the current IBC authoritative location

Statistical

Pre-2020 Census

*Statistical units are geographical areas defined solely for data collection, tabulation and analysis.

- Participant Statistical Areas Program
 - Block Group
 - Census County Division (county subdivision)
 - Census Designated Place
 - Census Tract
 - Oklahoma Tribal Statistical Areas
 - Alaska Native Village Statistical Areas (ANVSAs)
 - State Recognized Tribal Areas
 - State Designated Tribal Statistical Areas
 - Tribal Census Tract
 - Tribal Block Group
- Redistricting Data
 - Block Boundary Suggestion Project
 - Block
 - 34 States made submissions in 2016 including 1,150 Counties

Statistical

Post 2020 Census

*Statistical units are geographical areas defined solely for data collection, tabulation and analysis.

- 5-digit ZIP Code Tabulation Areas
- Metropolitan and Micropolitan Statistical Areas and related statistical areas
 - Metropolitan Divisions
 - Combined Statistical Areas
 - New England City and Town Areas (NECTA)
 - NECTA Divisions
 - Combined NECTAs
- Public Use Microdata Areas
- Urban Areas

Administrative

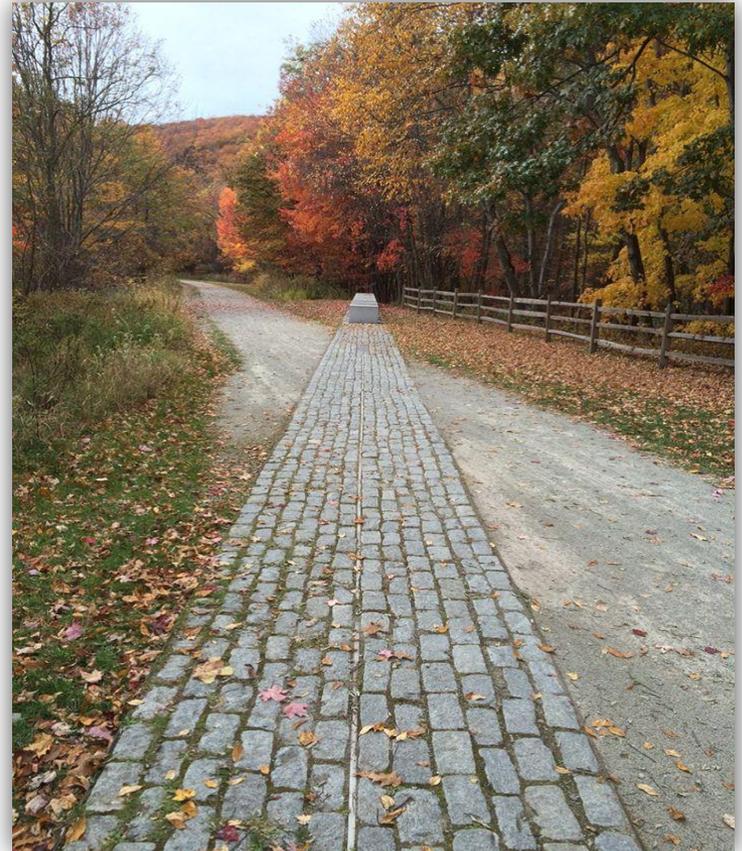
*Administrative rules or measures create administrative boundaries, specify their governmental or administrative functions, and contain provisions for establishing and changing their names and boundaries.

- **Census FIPS 55 Codes** (Ongoing updates)
- **Redistricting Data**
 - **Congressional District**
 - 4 states submitted new plans for 2016
 - **State Legislative District (Upper and Lower Chambers)**
 - Upper: 2 states submitted changes for 2016
 - Lower: 4 states submitted changes for 2016
- **School District (Elementary, Secondary, Unified)**
 - 34 States submitted changes in 2016 covering 1,378 School Districts
- **Topological Faces** (Ongoing updates)

Legal

Legal entities originate from legal actions, treaties, statutes, ordinances, resolutions, court decisions, etc.

- Boundary and Annexation Survey
 - Incorporated Place
 - Consolidated City
 - County and Equivalent
 - Minor Civil Division (county subdivision)
 - State and Equivalent
 - Subbarrio (Subminor Civil Division)
 - Alaska Native Regional Corporation
 - American Indian/Alaska Native/Native Hawaiian Area
 - American Indian Tribal Subdivision
 - Urban Growth Areas



Mason Dixon Line separating Somerset County, PA and Allegany County, MD.

Photo courtesy of Michael Ratcliffe 2015

Boundary & Annexation Survey (BAS)

Legal Boundaries in Effect on January 1

- Voluntary Annual Survey to collect legal boundaries
 - Legal effective date on or before January 1 of the BAS year
- Boundaries are used to tabulate data for
 - Decennial Census (year ending in 0)
 - Economic Censuses (years ending in 2, 7)
 - Population Estimates Program (annually)
 - American Community Survey (annually)
 - Local Employment Dynamics Program (annually)
- BAS 2016 Entities reported changes:
 - Counties: 442
 - Places: 2,466 (1,360 reported by County)
 - MCDs: 724 (705 reported by County)
 - Tribal Areas: 34
- BAS 2017 cycle is December 2016 through May 2017

Boundary & Annexation Survey (BAS)

Deadlines & Participation Options

Deadlines:

March 1 of Survey Year: updates reflected in American Community Survey (ACS) and Population Estimates Program (PEP)

May 31 of Survey Year: updates reflected in the following year's BAS

Participation Options:



GUPS (Geographic Update Partnership Software)



Digital (Commercial GIS)



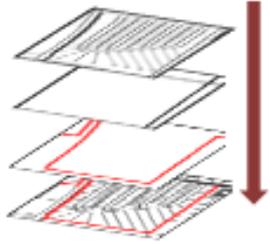
Paper Maps

Boundary & Annexation Survey (BAS)

Coordination with Redistricting

- As part of the 2020 Census Redistricting Data Program (RDP), State RDP Liaisons may submit boundary updates in Phase 1 (BBSP) & Phase 2 (VTD) *new for 2020*
- Census BAS staff coordinates any RDP-submitted updates with local BAS official for the jurisdiction
- More info on 2020 Census Redistricting Data Program:
<https://www.census.gov/rdo/>

Boundary Quality Assessment and Reconciliation Project (BQARP)



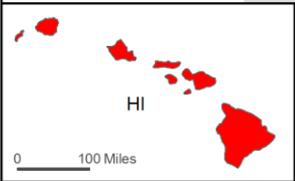
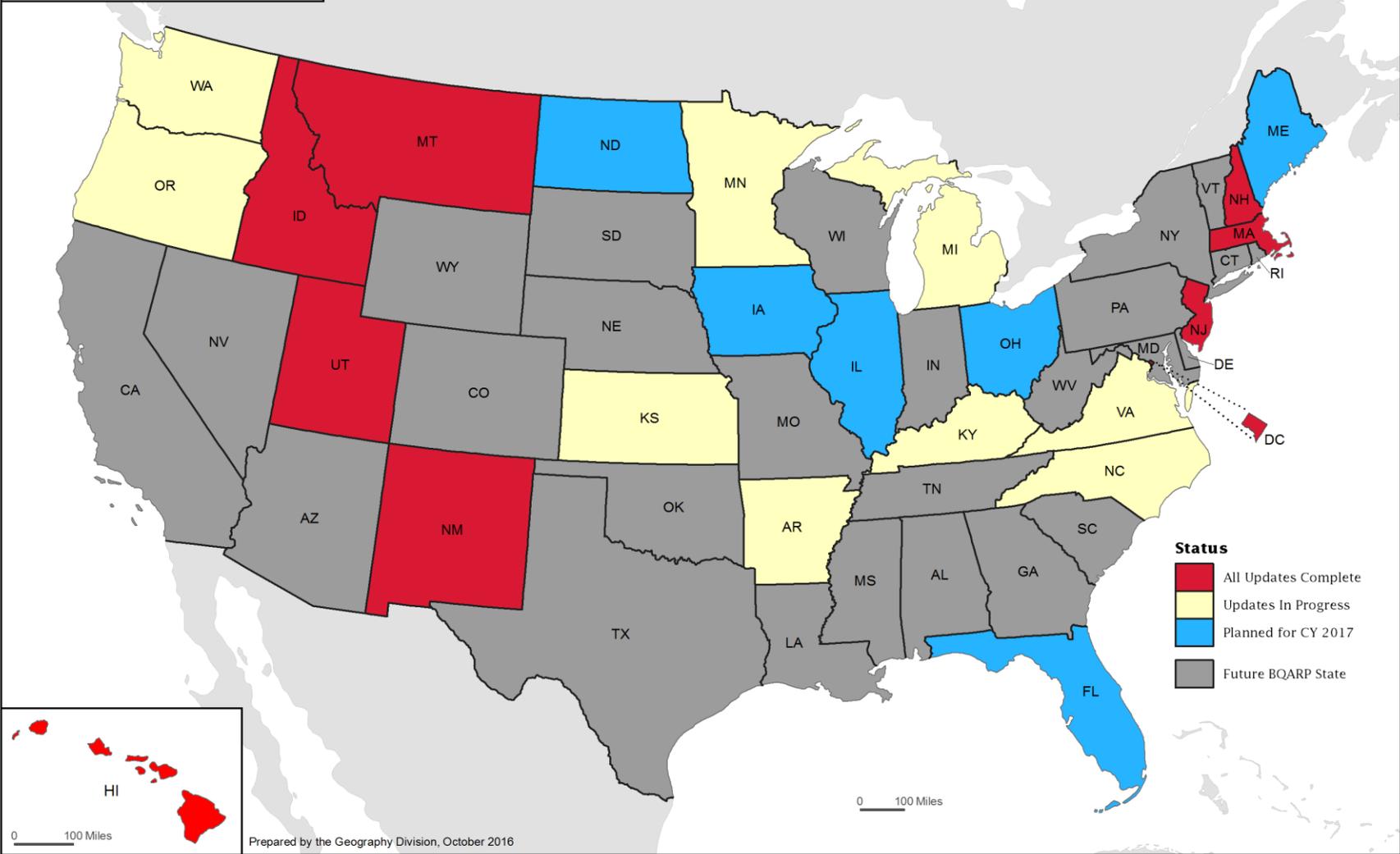
Goal: Improve legal and administrative boundary spatial quality in MAF/TIGER System

- Compare locally sourced data (acquiring whole data sets, not transaction polygons) to adjust Census Bureau boundaries
- Align to parcel and Public Land Survey System boundaries, where applicable
- Coordinate efforts with state partners
- Lock boundaries in place to prevent changes without legal documentation

Independent of the Boundary and Annexation Survey



Boundary Quality Assessment and Reconciliation Project (BQARP)
Program Status as of October 2016



Prepared by the Geography Division, October 2016

U.S. Census Bureau and the U.S. Department of the Interior (DOI) and the Bureau of Indian Affairs (BIA) Working Group

Established on January 11, 2016

Mission of the Workgroup:

- Collect and analyze American Indian and Alaska Native (AIAN) data, related to geographic boundaries, terms, and data dissemination
- Work together to promote collaboration, communication and corporation between the two agencies for AIAN data activities
- Improve the dissemination of accurate data, in furtherance of the government-to-government relationship between the United States and Indian tribes

Accomplishments of Working Group

Establishment of Thematic Subgroups

- *Geospatial Group* –developing a process for integrating BIA’s authoritative Indian land boundary data into BOC’s geographic database and products, and to be used as a building block for future data collection.
- *Federal Datasets and Products Group* –identifying common data needs and gaps for tribes and federal agencies.
- *Communications Group* –developing an overall systematic communication plan for this agreement, with internal and external subgroups, agencies, tribes, and the Federal Geographic Data Committee (FGDC), and act as liaison between groups.

Questions?