

Address Summit Pilot Update

Census Bureau
Community Addressing Conference
Leesburg, VA

April 18, 2013



U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU

2011 Census Address Summit

- September 2011
- Shepherdstown, WV
- 44 external stakeholders, 16 Census Bureau employees
- Break out groups brainstormed and generated ideas for potential pilot projects

Address Summit Pilot Projects

- Address Authority Outreach and Support for Data Sharing
- FGDC Address Standard and Implementation
- Federal/State/Local Address Management Coordination
- Data Sharing – Local and State Government, USPS, and Census
- Hidden/Hard to Capture Addresses

Pilot Teams

- Teams consisted of external stakeholders and Census Bureau staff
- 2012 focused on pilot development and implementation
- Each team generated a formal report documenting goals and objectives, methodology, findings, and recommendations

Challenges

- Time frame
- Conference calls vs. in person meetings
- Multiple units of government collecting and maintaining address data
 - Varying levels of responsibility in regard to data content and data sharing
 - Varying levels of adherence to standards
- Title 13

Next Steps

- Recommendations being used to inform the Census Bureau's Geographic Support System and future partnership program
 - Who is the address authority?
 - How well do geospatial sources adhere to standards?
 - What is the best way to communicate with approximately 40,000 units of government?
 - What type of feedback products should we provide to our partners?
 - Can we integrate these recommendations into our existing geographic programs?

Address Authority Outreach and Support for Data Sharing Pilot

Census Bureau
Community Addressing Conference
Leesburg, VA

April 18, 2013

Background

- As part of the GSS-I, the Geography Division intends to establish processes that utilize partner-supplied address data to perform continual inter-decennial updates of the MAF
- Prior address data sharing programs have been impressive (LUCA, New Construction, BAS)
- Desire to improve participation rates via the development of a more targeted contact dataset: identifying local addressing authorities
- The resulting dataset would also assist state and local governments in establishing their own data sharing programs

Goal of the Pilot

To research and develop an approach for identifying and creating an inventory of address authorities which facilitates address data sharing activities.

Objectives of the Pilot

- Identify the multiple aggregators of address data within state & local governments
- Develop a new, or utilize an existing, web-based portal for creation & maintenance of Address Authority contact information
- Explore the best ways to communicate with all Address Authorities within a jurisdiction about state and Census Bureau programs
- Utilize the contact information to disseminate information on data sharing programs, benefits, and strategies for overcoming barriers

Team Members

- Laura Ermine – IT Specialist, Middle Georgia Regional Commission (formerly)
- Anne O'Connor – US Census Bureau, Geography Division, National/State Geographic Partnerships Branch
- Christopher Stephenson – US Census Bureau, Field Division, Geographic Support Branch
- Kathryn Wimbish – Team Lead - US Census Bureau, Geography Division, Tribal/Local Geographic Partnerships Branch

Methodology

To identify the multiple aggregators of address data within state & local governments, the pilot team analyzed data from the following resources:

- 2011 Address Summit Attendee Survey
 - Attendee's role within their respective government/agency and information about the types of addresses they collect and store
- Geographic Program Participant (GPP) Database
 - Types of governments, population count, departments and positions of contacts who previously worked on Census Bureau address-related geographic programs

Methodology

Develop a new or utilize an existing, web-based system?

- The Geographic Program Participant database (GPP)
 - The Census Bureau's existing, in-house system
 - Small sample of external partners + short timeframe + limited programming resources --> revising / expanding the GPP was not feasible
 - Searched for a feasible alternative: automated form created using MS Word
- The GIS Inventory
 - NSGIC's existing web-based system
 - Address-related information is becoming NSGIC's #1 priority
 - This joint venture coincides with NSGIC's goal of increasing participation in the GIS Inventory

Methodology

Designing the Questionnaire

- Developed to capture information needed to fulfill the objectives of the pilot
- Follows the FGDC standards as closely as possible
- Consulted with NSGIC staff to ensure the questionnaire met their needs and standards
- Referred to the GPP for existing fields to use as a base
- Attention was paid to the wording of the questions knowing that the prospective partners would represent governments that varied in terms of population size and in levels of staff technical expertise
- “Other” and/or “Unknown” selections
- Also, select Address Summit attendees, RO staff, and NSGIC staff performed a peer review on all pilot materials

GIS Inventory Questionnaire

GIS INVENTORY
The Ramona GIS Inventory is a service of the National States Geographic Information Council (NSGIC)

Attachment D - GIS Inventory Log In

LOG IN
Create New Account

HOME DATA LAYERS STATUS MAP MY PROFILE DIRECTORY GETTING STARTED ABOUT SUPPORT

Public Safety Interface
Designed for members of the Public Safety Community

U.S. Census Bureau
Address Authority Questionnaire

NSGIC
National States Geographic Information Council Web Site

GIS Inventory Questionnaire

GIS INVENTORY
The Ramona GIS Inventory is a service of the National States Geographic Information Council (NSGIC)

Create New Account

HOME DATA LAYERS STATUS MAP MY PROFILE DIRECTORY GETTING STARTED ABOUT SUPPORT

Address Authority Questionnaire

Log Out

ADDRESS AUTHORITY QUESTIONNAIRE

Login Successful

Save * Denotes a required field

Login Information

Work E-mail address *

(Note: your E-Mail address will be your username when you login)

Password Update

If you want to change your password please enter it twice here.
Leave these fields blank if you are not changing your password.

Password (at least 8 characters, case sensitive)

Password again (at least 8 characters, case sensitive)

Name Information

2. First Name * 3. Last Name *

GIS Inventory Questionnaire

Data Distribution Policies

16. Do you currently create Federal Geographic Data Committee (FGDC) compliant metadata for your data?

17. Does your organization have a written data distribution policy?

18. If yes, how is your data distribution policy available?

- E-mail
- Hardcopy by Mail
- Hardcopy by FAX

Website (Please list the URL, begin with http:// OR https://)

Other (Please list)

19. Do you make your data available for download?

If Yes Please list the URL, (begin with http:// OR https://)

Automated Form Questionnaire

Layer (if multiple): _____

7. What address data is the contact responsible for?
Note: If there are multiple address-related files, then fill out one questionnaire per file
- Parcel: *this file is usually a geospatial layer, and may have the addresses snapped to it as an attribute*
 - Address: *this file may also be a geospatial layer; either a road centerline or an address point feature class*
 - Address Ranges: *i.e., Road Centerline*
 - Address Points: *i.e., Situs, E911*
 - Tax Assessor: *i.e., Digest; this file is usually tabular*
 - Government Services: *i.e. water, sewer, refuse; this file is usually tabular*
 - MSAG (Master Street Address Guide): *from the E911 Centers or a public safety commission*
8. What is the geographic coverage of the contact's address data? (Select One)
 Full coverage Partial coverage Other: _____
9. Which phase best describes the status of the address data? (Select One)
 Under Preliminary Review In Progress Complete Unknown
10. How frequently does the contact update the address data? (Select One)
 Continually Daily Weekly Monthly Quarterly Yearly Unknown
 Other: _____
11. Regarding the address data, the contact is responsible for: (Select One)
 Content: *i.e., contact is responsible for maintaining and manipulating the data (Skip to #13)*
 Sharing: *i.e., contact is responsible for distributing or sharing the data for release beyond their organization*
 Both
12. If "Sharing" or "Both" is selected in #11, can the contact share the address data with the Census Bureau? (Select One)
 Yes No
13. Are there any use restrictions for the address data? (Select One) *use restrictions refer to what we can and can't do with the address data; conditions refer to additional information the file provider may require before sharing their data, such as registering on their website*
 Yes Yes, but conditions apply No No, but registering to download is required (free)

Methodology

Selection of the Prospective Participants

- The pilot team selected a total of 56 entities from across the country
- The pilot team based the group selection on the following criteria:
 - participated in an address-related geographic program (LUCA, NC, or BAS)
 - had not participated in an address-related geographic program
 - type of government (tribal, state, county, incorporated place, town/township)
 - size of government (using 2010 Census population counts)
- The resulting sample included:
 - 20 counties, 12 incorporated places, 16 towns/townships, five tribal governments, and four states across the country
- The list was then divided between the RO staff's responsibility to contact the participant and the pilot team's responsibility to ask the participant to use the GIS Inventory

Methodology

Communicating with the Prospective Participants

- Email
 - Sent by the pilot team lead
 - Included an overview of the GSS-I, an overview of the pilot, and URLs to the GSS-I and the pilot web pages
 - Sent to the LUCA liaison, the New Construction contact, the BAS contact, or the highest elected official, in that order of availability for the respective entity
- Phone Call
 - RO staff contacted their assigned prospective participants by phone to ask the questions in the questionnaire
 - Tribal/Local Geographic Partnerships Branch staff called those prospective participants who did not enter their data into the GIS Inventory

Findings

- The pilot team sees the methods used in this pilot as viable tools for moving forward to collect information about the Address Authority and the data they represent
- Regional Office staff found the pilot to be a worthy exercise and provided suggestions for improvements and inclusions into the search process for the Address Authority. They understand the need for the Census Bureau to identify the Address Authority and the need for a complete and easy tool for capturing information
- Participants understood the need to forge a partnership with the Census Bureau so that they may more easily share their address data

Findings

- The Addressing Authority is a new concept
- States and counties are the majority of governments that use the GIS Inventory system, and the counties are the stronghold for entering their information
- Developing a web-based system is an idea worth pursuing. It allows the governments to have control of their contact information and places the responsibility on them, which then strengthens their role and responsibilities with respect to a partnership with the Census Bureau
- The sharing of data among all levels of government will require nurturing and time for many states

Recommendations

- The Census Bureau must expand & clarify the definition of Address Authority:
 - There can be multiple Address Authorities for a government
 - The difference between the person who has the authority to share the data & the Address Authority who is responsible for the content of the data
 - The Address Authority who has authority to share the data is the Census Bureau's primary target for contact
- The Census Bureau should help foster a relationship between the counties and their states with the ultimate result of the states becoming the source of address data
- The Census Bureau Regional Office staff have a wealth of experience in partnering with governments. They must continue to maintain a healthy and constant relationship with the various levels of government in their respective regions to facilitate communication between the various levels of government

Recommendations

- The GEO should either create a Census Bureau web-based system or should invest resources into promoting the use of a system sponsored by another agency
- Since a web-based system would be a novel approach for the Census Bureau, the Census Bureau should create a strong marketing program to educate and encourage governments to independently enter and maintain their contact and geospatial data information

Kathryn Wimbish

301.763.8632

kathryn.c.wimbish@census.gov

FGDC Address Standard and Implementation Pilot

Census Bureau
Community Addressing Conference
Leesburg, VA

April 18, 2013

Background

- The need to comply with the FGDC Address Standard
 - Many diverse formats exist for address data
 - Ambiguity may exist when exchanging addresses
 - A systematic approach to quality testing benefits everyone
- The need for the Pilot Project
 - Agencies want help with implementing the FGDC Address Standard

Goal of the Pilot

To educate local authorities on the benefits, use, and implementation of the Federal Geographic Data Committee's United States Thoroughfare, Landmark, and Postal Address Data Standard (FGDC Address Standard)

Objectives of the Pilot

- Provide the knowledge needed to understand and implement the address standard
- Encourage adoption of the address standard
- Identify common concerns

Pilot Team Members

Shawn Holyoak, City of Dallas, TX, GIS Technical Manager

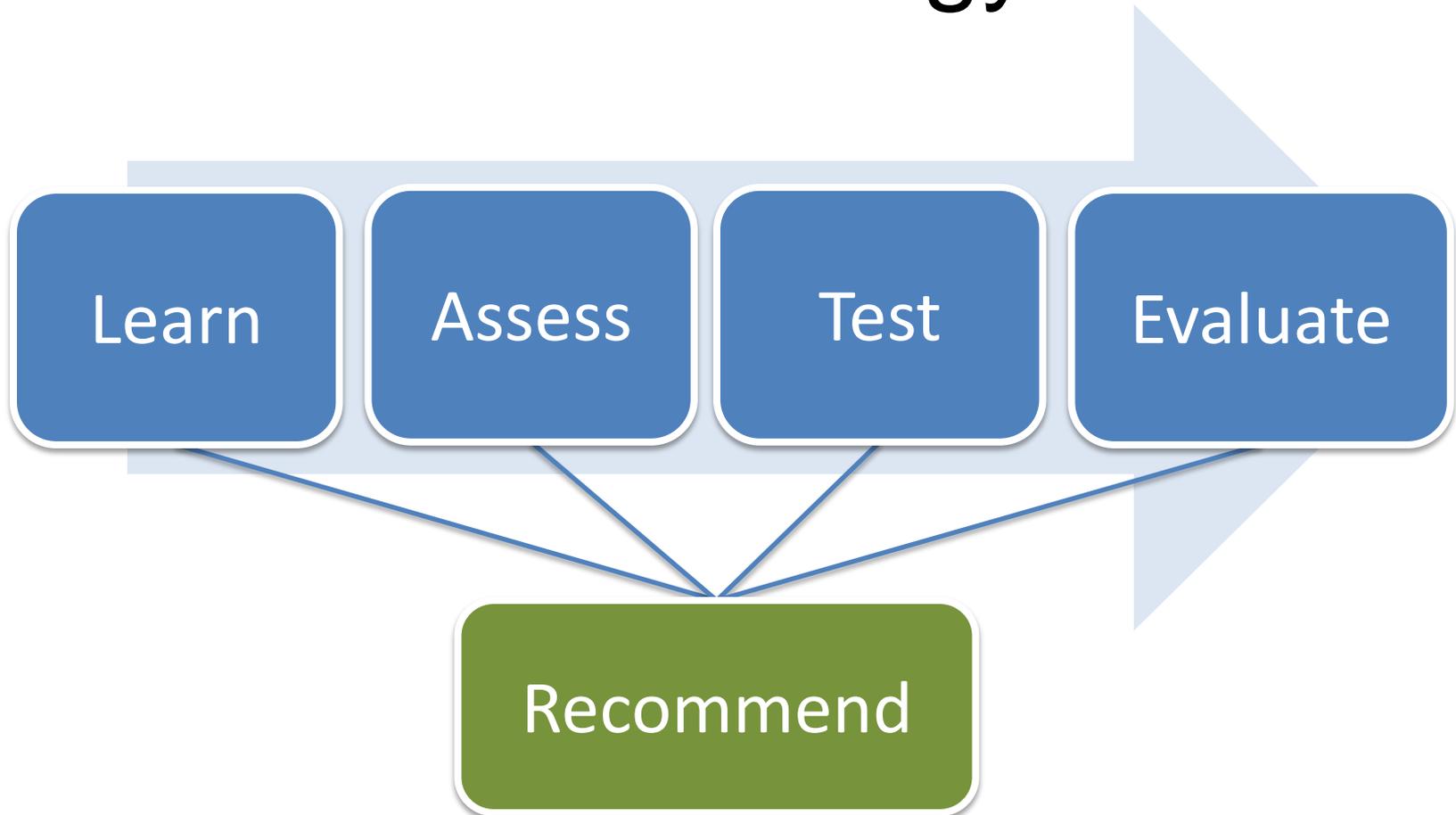
Henock Kebede, Geography Division

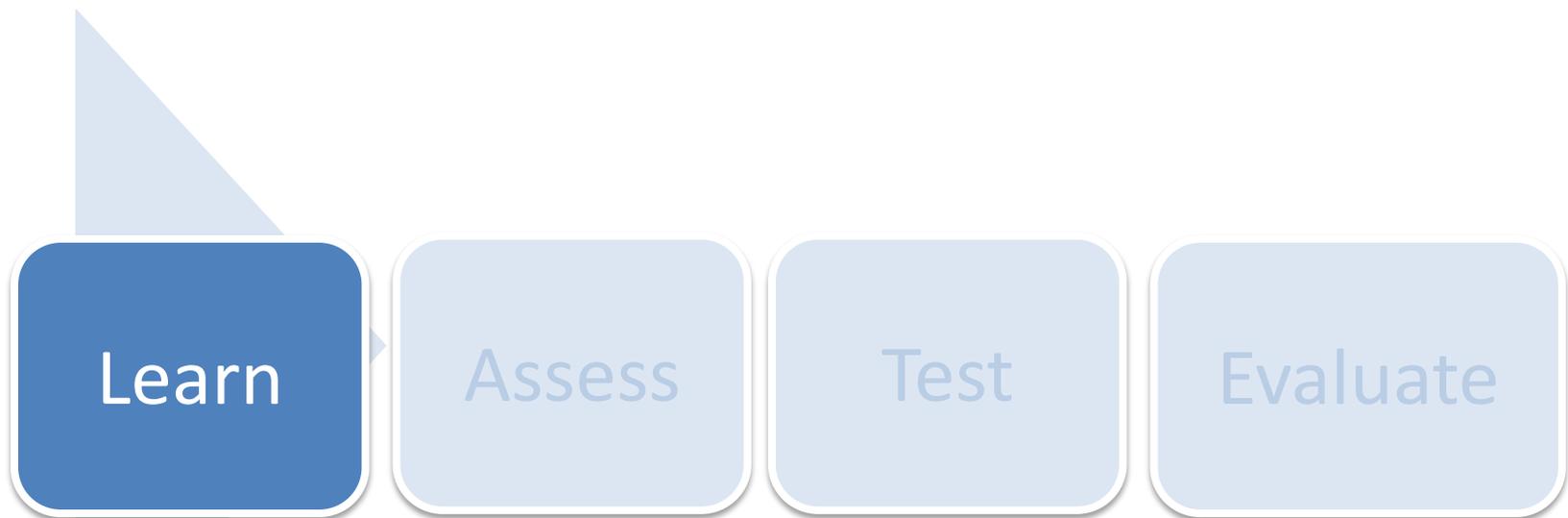
Anthony Knapp, Geography Division

Lynda Liptrap, Geography Division – Team Lead

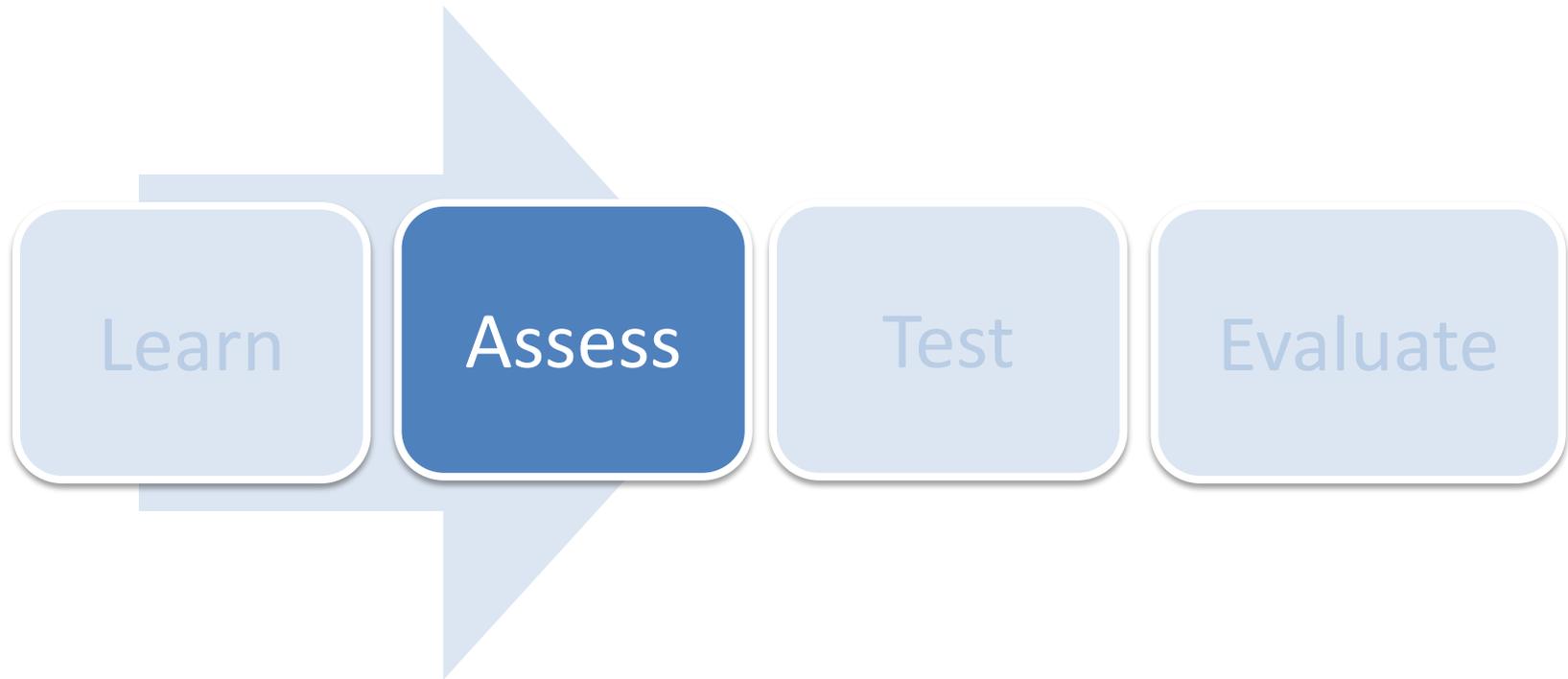
Sean Uhl, Geography Division

Methodology

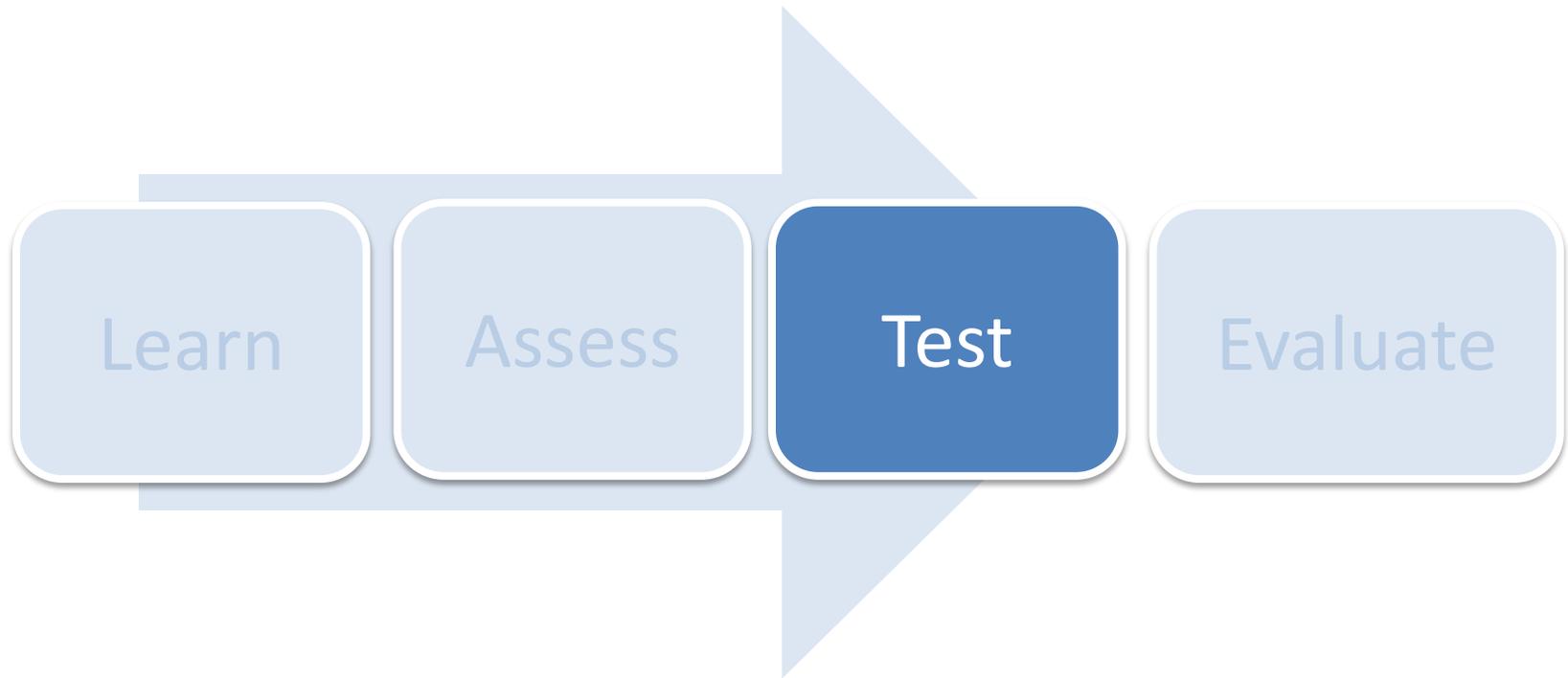




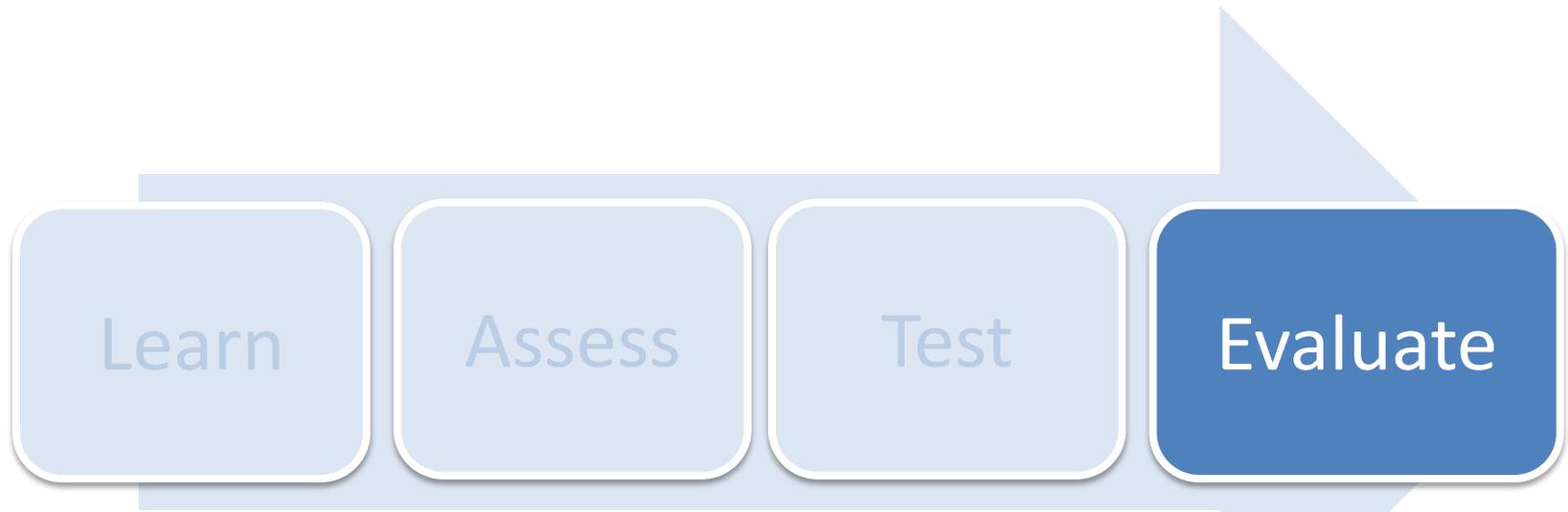
- Through in-house training materials and the Spatial Focus Workshop, the team and participants learned about:
 - FGDC Address Standard concepts
 - Address Quality and Data Exchange Tool (by Spatial Focus)



- Through research and the Implementation Questionnaire, the team assessed:
 - Tools
 - Existing Training Materials
 - Best Practices
 - Common Concerns



- Through visual inspection and use of the Address Standard quality measures, the team:
 - Tested external partner data for mandatory Address Standard elements
 - Measured quality using a few basic quality measures



- Through evaluating the test results, the team:
 - Noted deficiencies in the sample data
 - Identified remedies for the deficiencies

Findings from Learning Activities

- Identified the mandatory elements of the Address Standard
- Identified optimum elements and best practices
- Generated training products
 - In-house “Guide to the Standard”
 - Recording of the Spatial Focus Workshop and the PowerPoint handout

Findings from Assessing Activities

- Confirmed that very few tools exist to facilitate the implementation of the Address Standard
- Confirmed that there is a lack of no-cost training on the Address Standard
- Lack of training was identified as an impediment to implementation by our questionnaire respondents

Findings from Testing and Evaluating Activities

- Agencies' address data may lack mandatory address elements and have other limitations
 - prevents the use of the Address Standard Tool to create exchange files and measure quality
- Outlined a phased approach for implementation
- Identified a core set of data quality measures

Recommendations

- Develop comprehensive training materials and a guide/workbook for the Address Standard
- Establish a working group for the addressing community - the Address Standard Implementation Working Group
 - to formulate implementation strategies with input from tribal, federal, state, county, local entities
- Establish a website to support the Working Group and the addressing community

Additional Recommendations

- Establish a Census Bureau working group to evaluate and prepare for:
 - Updates to the Census Bureau's Data Content Guidelines
 - Data submissions in the Address Standard Exchange format
 - Utilization of quality measures for data submissions
 - Census Bureau specific training
 - A pilot of the new GUI Spatial Focus Address Quality and Data Exchange Tool with partners

Lynda Liptrap

301-763-1058

lynda.a.liptrap@census.gov

Shawn Holyoak

214.948.4136

shawn.holyoak@dallascityhall.com

Federal/State/Tribal/Local Address Management Coordination Pilot

Census Bureau
Community Addressing Conference
Leesburg, VA

April 18, 2013

Background

- Multiple organizations are stressing the need for improved address data sharing to improve efficiency, reduce costs, and eliminate duplication of efforts
- Different states are at various stages of development of statewide address data sets in partnership with local governments
- All stakeholders, including Census, would benefit from the creation of a model that can be adopted by any state, tribal, or local government

Pilot Team Members

Daniel Biggio, Heidi Crawford, Colleen Joyce, Tanya Sadrak, US Census Bureau, Geography Division

William Johnson and Cheryl Benjamin, New York State Office of Cyber Security

Joe Sewash, North Carolina Center for Geographic Information and Analysis

Arbin Mitchell, M.C. Baldwin, and Norbert Nez, Division of Community Development, Navajo Nation

Rachel Bello, Guilford Metro 911, Guilford County, NC

Michael Fashoway, Montana State Library

Goal of Pilot

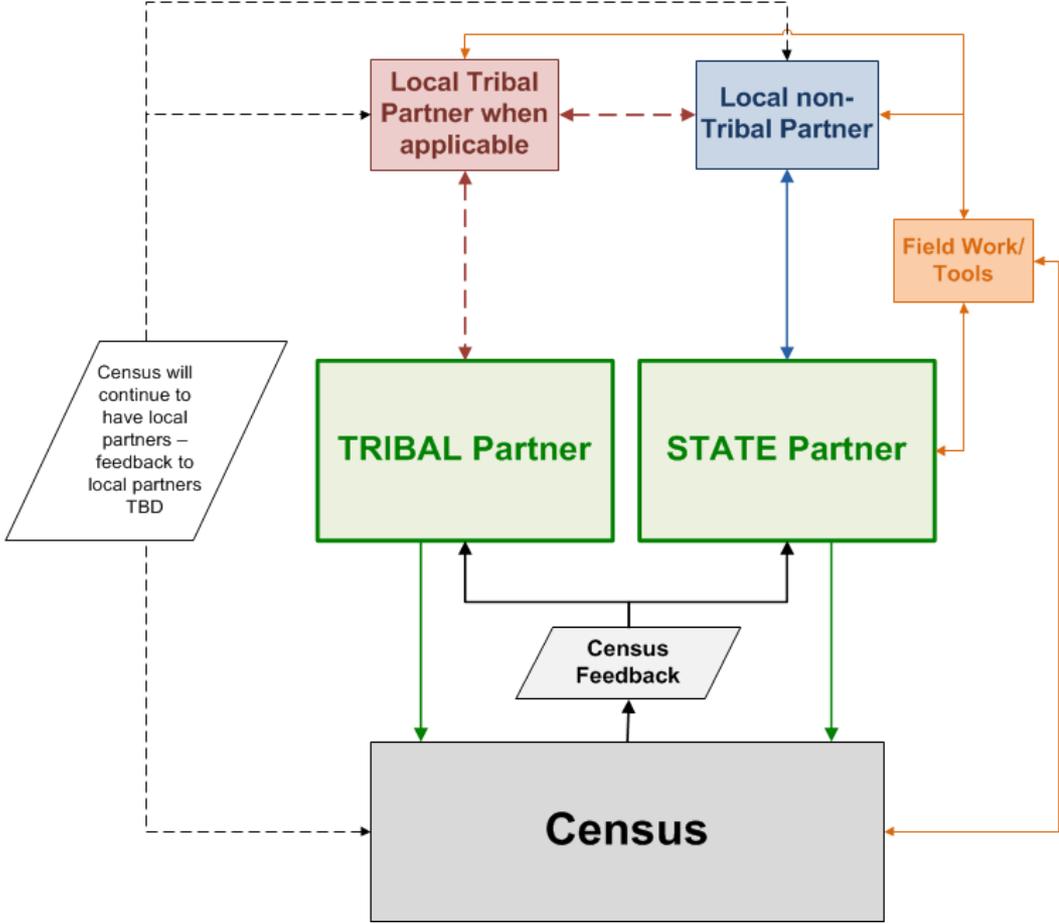
To create a formalized model to allow for the development, maintenance, and bi-directional (state-local, state-federal, and tribal-federal) sharing of high quality, multiple use, address data

Objectives of Pilot

- Identify the best practices, processes, roles and responsibilities, and standards for address development, maintenance, and sharing
- Develop a model that will result in bi-directional sharing of address data that meets the business needs of the Census Bureau and external stakeholders

Methodology

Comprehensive Address Stewardship Model
State or Tribal Level Steward, All Level Participants
High Level Data Flow - Federal Feedback Loop



Methodology

Feedback Recommendations:

- REC1 – Discrepancy Areas of Interest (Polygons)
- REC2 – Master Address File (MAF) Tallies
- REC3 – Business Case Support
- REC4 – Provide street features present in TIGER, but not in partner files
- REC5 – MAF-Partner non-source specific discrepancy counts

Methodology

Feedback Recommendations:

- REC6 – MAF-Partner source specific discrepancy indicators
- REC7 – Evaluation of partner file for a measure of overall quality and completeness
- REC8 – Consolidated information sheet of Census data publicly available
- REC9 – Information on ZIP Codes

Findings/Recommendations

Census feedback to states/tribe

- Moved forward with (RECs 1, 2, 3, 5, 6, 7, 8)

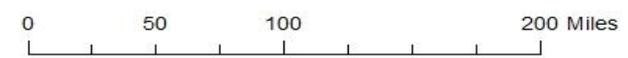
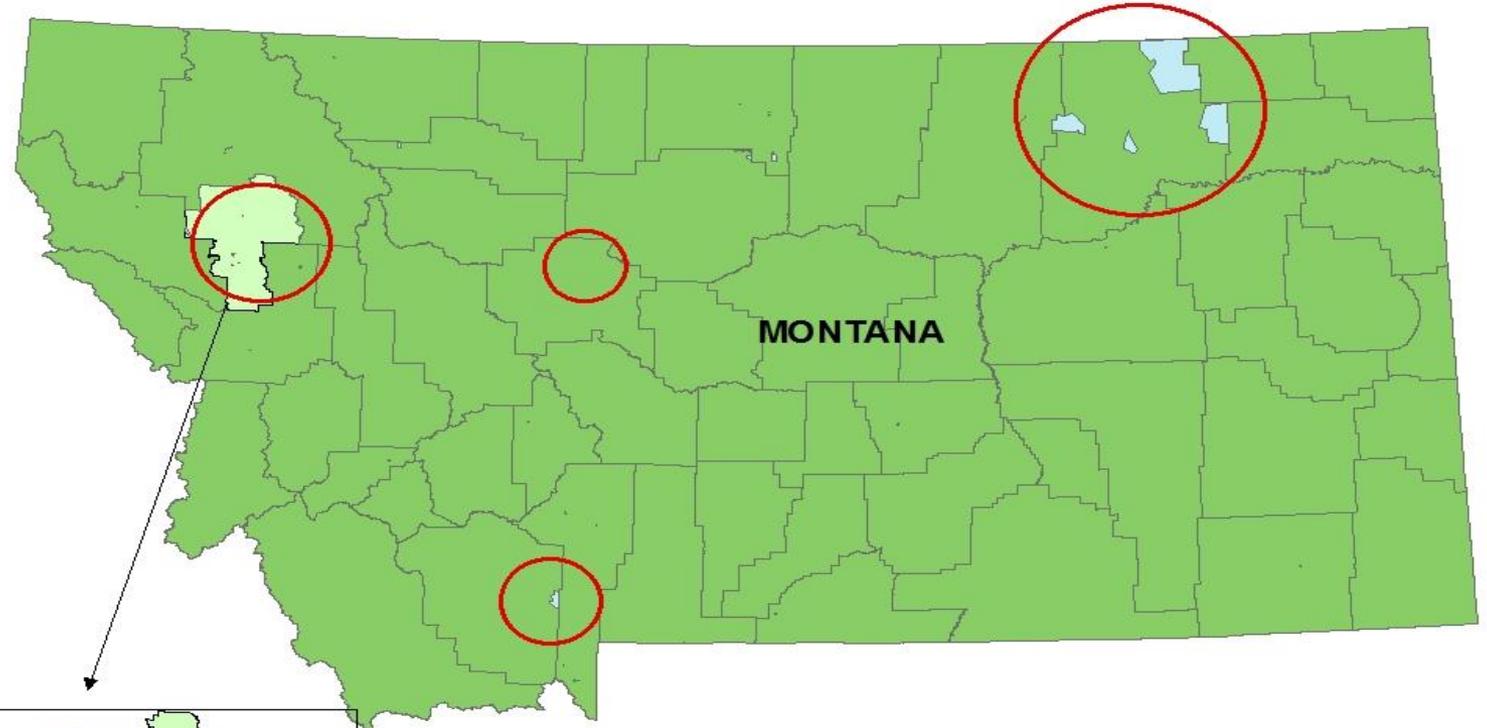
Recommendations not carried forth

- REC4 – Provide street features present in TIGER but not in partner files
- REC9 – Information on ZIP Codes

Some highlights of the findings

- REC2 – Master Address File (MAF) Tallies
 - Team recommends this type of feedback be offered, but consider offering at levels below county – town, city, and village.
- REC3 – Business Case
 - Team recommends this type of feedback be offered with some suggested modifications

Federal/State/Tribal/Local Address Management Coordination Pilot



Findings/Recommendations

Local → State/Tribe → Census Data Model

- External partners tested aspects of the model and found a model in which the Census Bureau works through the state/tribe to obtain local data is viable
 - More testing of model at local level
 - Stakeholder communication plan
 - Model should be shared and updated
 - Pursue creation of a Resource Library

Findings/Recommendations

Title 13

- Census should continue to have discussions about Title 13 and what can/cannot be provided to partners
- Internal process of determining what was/was not within Title 13 took a higher level of effort and time
 - Required multiple meetings with Census policy groups
- Limited utility of products covered under Title 13 were drawbacks for partners
- Signing of paperwork for access to Title 13 data
 - Signature required of the HEO, process took time for all parties

Heidi Crawford

301.763.8644

heidi.r.crawford@census.gov

Joe Sewash

919.754.6590

joe.sewash@nc.gov

Data Sharing – Local, State, USPS, and Census Pilot

Census Bureau
Community Addressing Conference
Leesburg, VA

April 18, 2013

Goals and Objectives of the Pilot

The goal was to examine ways to improve the process of address data sharing and build on existing partnerships between local governments, state governments, the USPS, and the Census Bureau given existing laws.

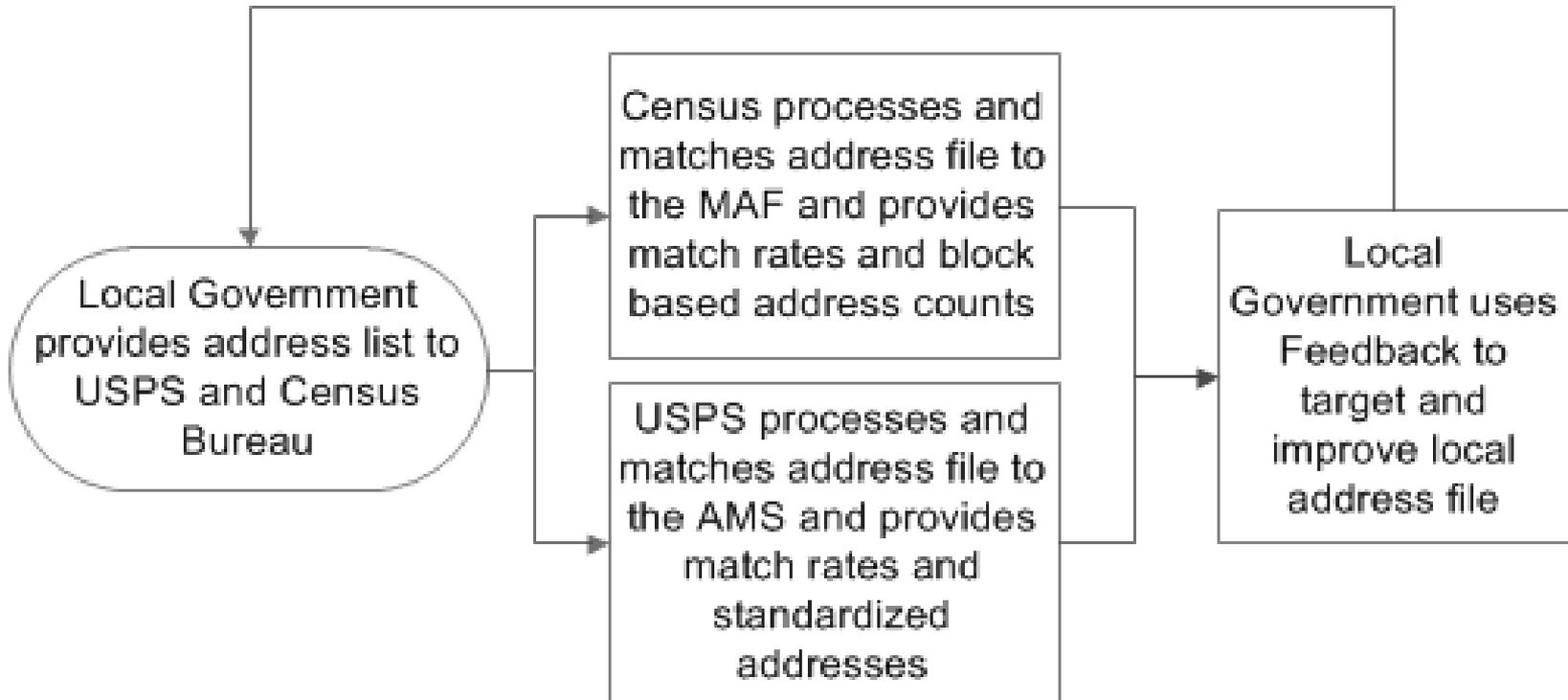
Objectives

- Beneficial to all stakeholders
- Simple, efficient, flexible and least intrusive
- Allows for easy comparison of address data
- Encourages future data sharing and continuous address updates

Team Members

- **Charles Pruitt**, USPS County Project
- **Barney Krucoff**, Maryland Geographic Information Officer
- **Michael Horgan**, Census Bureau Geographer
- **Michael Clements**, Census Bureau Geographer
- **Andrew Stanislaw**, Census Bureau Geographer
- **Chad Toves**, Census Bureau Geographer

Methodology



Findings

- Match Rates were generally high (over 95 percent exact match in many areas) when comparing local data with Census Bureau and the USPS data
- Secondary or sub-addresses were responsible for the majority of mismatched addresses
- Common discrepancies include:
 - Mismatched or missing unit descriptors (e.g., APT, UNIT)
 - Mismatched street name pre and post directionals (e.g., E Main St or Main St E)
 - Street name post type (e.g., LN, DR, ST)
 - Inconsistent or misspelled street names (e.g., Bank St and Banks St)
- Local and state government are not significantly incentivized by the level of feedback Census and USPS can provide
 - USPS requires that the submitting local governments match 90% of the addresses (including units) within a zip code to get the maximum feedback; however, zip codes overlap jurisdictional boundaries
 - Census Bureau feedback is limited

Recommendations

- Census Bureau should assist the USPS and local government in evaluating and editing address files prior to running the matching software
- All partners work together to standardize secondary/sub-addresses
- Match rates can and should inform future updates and targeted address canvassing
- Census Bureau should make tract or block group level MAF counts and match rates available to local and state government

Andrew Stanislaw

301.763.9129

andrew.stanislaw@census.gov

Barney Krucoff

443.370.3008

barney.krucoff@maryland.gov

Hidden/Hard to Capture Addresses Pilot

Census Bureau
Community Addressing Conference
Leesburg, VA

April 18, 2013

Definition of a “Pilot Study”

- A small-scale experiment or set of observations undertaken to decide how and whether to launch a full-scale project
- Data gathered from pilot studies are fed back into the planning and design process and adjustments are made accordingly

Overall Goal of the Pilot

To gain a better understanding of “hidden/hard-to-capture” addresses and to suggest ways of defining them, as a means of gaining a common understanding that, with further research, can be used for identifying similar areas across the nation.

Background

- Any plan for a selective canvass of the nation needs to include specifications that can be used to identify places with an abundance of hidden housing units – a difficult task
- What is a hidden address?
 - Addresses where people could or do live at, but are not easily identifiable
 - Frequently lack conventional labels, such as apartment numbers

Examples of Hidden Addresses

- Small and large multi-unit buildings that once only had a few housing units and now have additional apartments
- Owners of large houses with full basements and attics may turn those spaces into rental apartments
- Two or more separate housing units may exist in the main living space
- Garage has been converted into a housing unit















More Detailed Objectives

1. Sort out the major issues involved in the identification of hidden units in the field
2. Suggest listing procedures that can be utilized by field staff to help identify these addresses
3. Produce descriptive statistics on a sample of addresses from census blocks containing hidden units on the sources of addresses, their verification as hidden, and their disposition in the 2010 Census

Methodology

- Apply locally-determined criteria to select specific geographic areas for field examination (44 blocks, about 9,000 addresses in Queens, NY)
- Apply criteria for a working definition of hidden addresses
- Develop field procedures aimed at helping to identify hidden addresses, using the Census Bureau's Master Address File as a starting point
- Using the working definition of hidden addresses, identify addresses that fall into this category (may or may not be on the MAF)

Methodology (continued)

- Analyze the results of the address listing on three primary dimensions
 - Address source (e.g., 1990 ACF, DSF, LUCA 2000/2010)
 - Disposition in the field work – verified, deleted, nonresidential, as well as a flag indicating whether address was hidden or not
 - Disposition in the 2010 Census
- Compile a list of issues and recommendations from the pilot
- Explore the feasibility and usefulness of extending the pilot to other areas of the nation

Preliminary Observations

1. Of the 9,000 addresses in Queens blocks, about 20 percent had LUCA 2000 or LUCA 2010 as the source
2. There were about 1,400 addresses (16 percent of all addresses) that were deemed “hidden,” based on the criteria established in the methodology
3. For 80 percent of the 9,000 addresses, the fieldwork was consistent with the results of the 2010 Census

Continuing Research: Next Stage?

1. What was the disposition of hidden addresses in the 2010 Census?
2. Were the addresses deemed as “hidden” disproportionately from LUCA, compared to those from other more standard sources?
3. What can we learn from the 20 percent of addresses where there was an inconsistency between the fieldwork and the 2010 Census results going forward?
4. How can what we learned be applied to other areas of the nation?

Pilot Team Members

Ilene Jacobs, California Rural Legal Assistance, Inc.

Joseph Salvo and Peter Lobo , New York City Department of City Planning

Deirdre Bishop, Geography Division

David Kraiker, NY Regional Office

Tim McMonagle, LA Regional Office

Paul Riley, Geography Division

Brian Timko, Geography Division

Ted Sickley, Geography Division

Kaile Bower, Geography Division

Dr. Joseph Salvo

212.720.3434

jsalvo@planning.nyc.gov