

FGDC Address Theme Subcommittee Kickoff Meeting

***Census Bureau HQ
Suitland, MD
February 14th, 2016***



Welcome

Deirdre Bishop

Chief, Geography Division

U.S. Census Bureau

Meeting Agenda

- **Meeting Goals**
- **Introductions**
- **Background and Challenges**
- **Theme Definition***
- **Subcommittee Charter**
- **Next Steps**

Meeting Goals

Steve Lewis

GIO, U.S. Dept. of Transportation

Co-Theme Lead

Subcommittee Co-Chair (acting)

Meeting Goal

- ❖ Finalize Theme Definition



DOT

TBD

Executive Champions



Tim Trainor



Steve Lewis

Theme Leads



Lynda Liptrap



Steve Lewis
(acting)

Subcommittee Chairs



Mark Lange



DOT

TBD

Tech Operations Manager

Dataset Manager



Matt Zimolzak

Introductions

❖ Introductions:

How does your organization consume or produce address data?

What is your organizations interest in addresses?

Membership at a Glance

❖ Are we missing any key partners or agencies?

Theme Goals

- ❖ Define the Theme
- ❖ Establish a Charter for the Subcommittee
- ❖ Gather User Requirements
- ❖ Assess the Pilot Database
- ❖ Develop a Strategic Plan

Address Theme Background and Challenges

Lynda Liptrap

U.S. Census Bureau

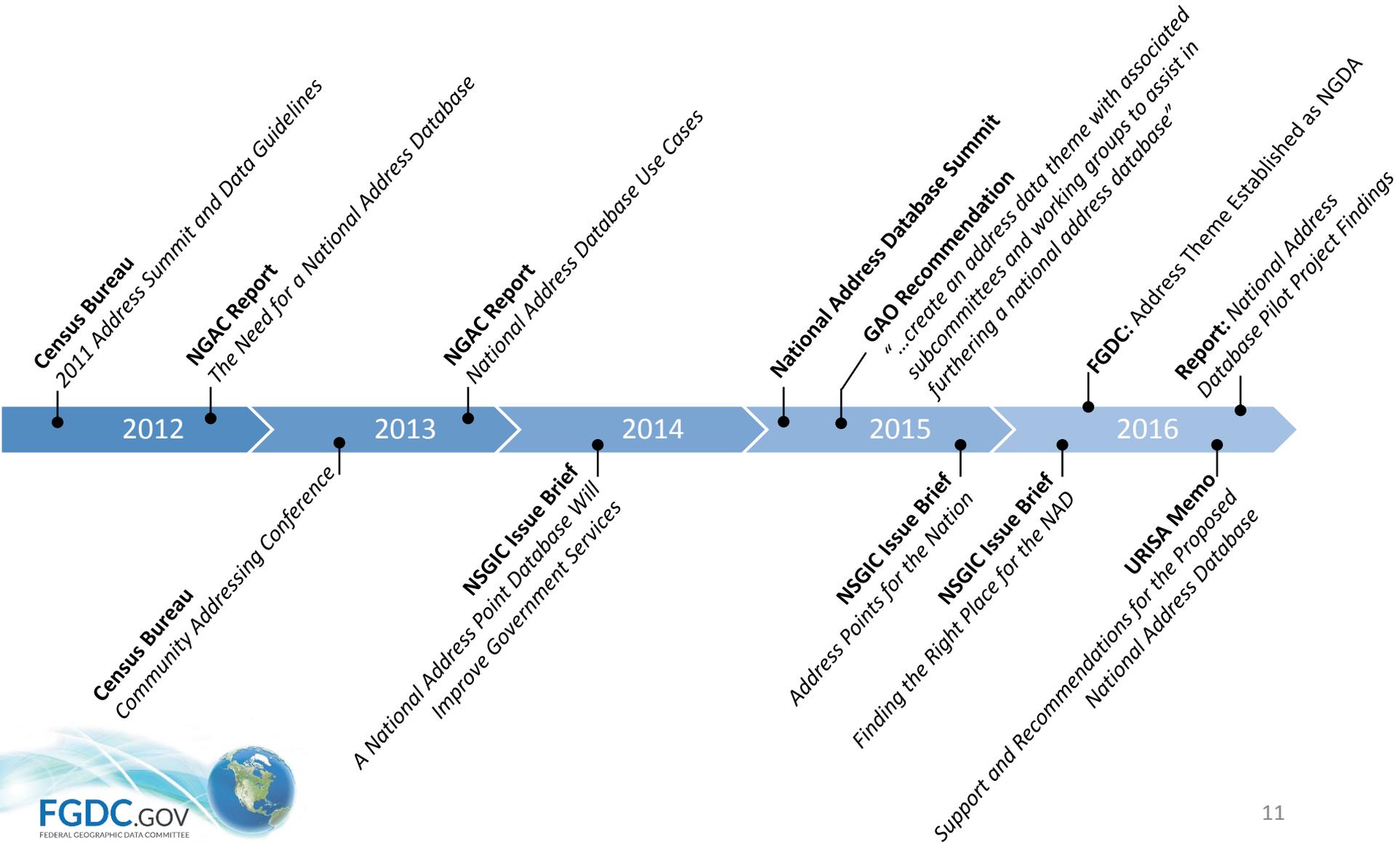
Co-Theme Lead

Steve Lewis

U.S. Dept. of Transportation

Co-Theme Lead

Address Theme and NAD Timeline



The National Address Database Summit

- ❖ Held April 8-9, 2015 at the Maritime Institute in Linthicum, MD
- ❖ Funded by DOT
- ❖ Objective: To identify and discuss possible options for developing a National Address Database (NAD)
- ❖ Broad stakeholder representation
 - Government (Federal, State, Local, and Tribal)
 - Private Sector
 - Non-Profits and Trade Organizations

Summit Attendees

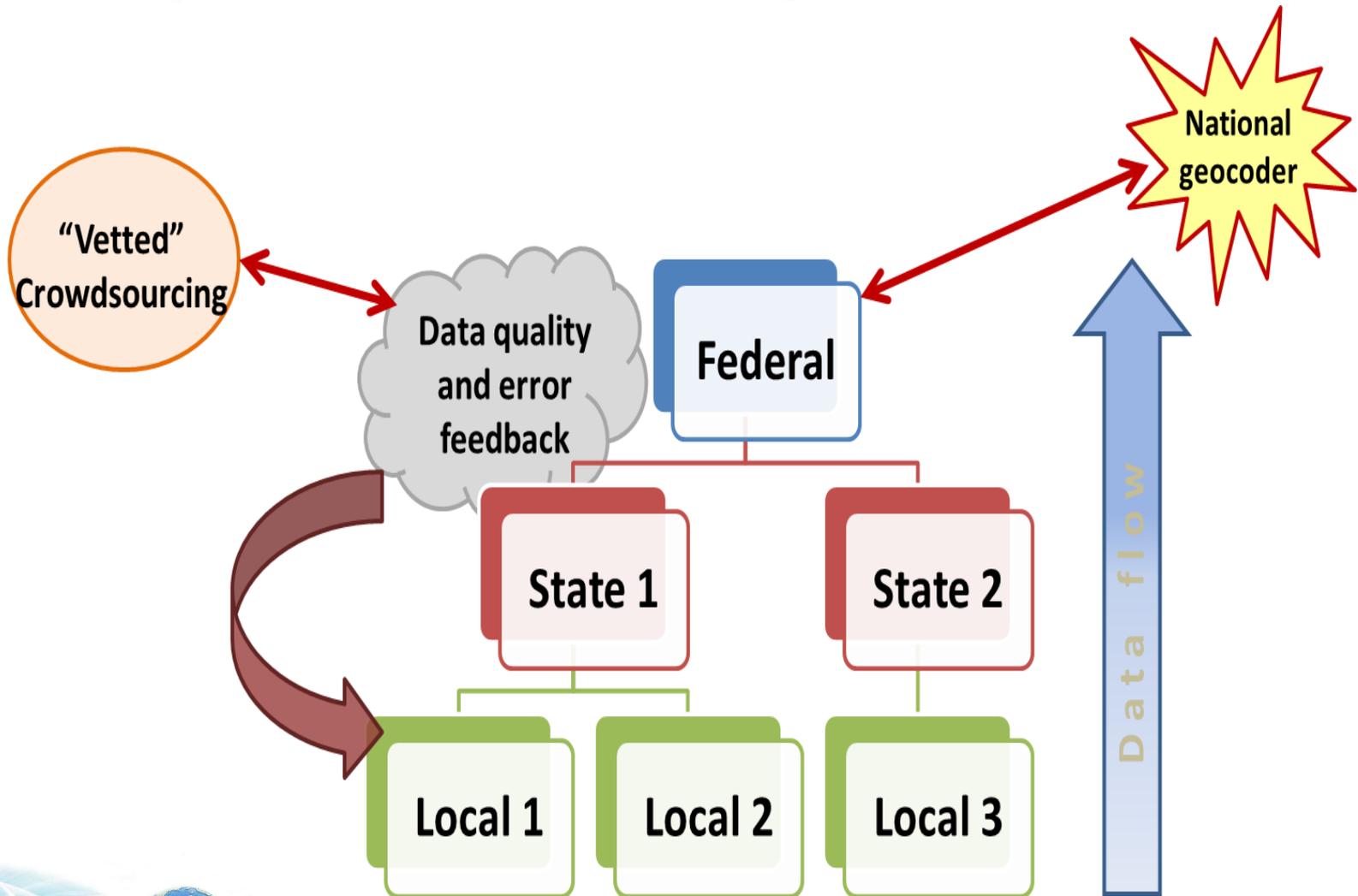
58 Participants

- 10 Federal agencies
- 16 State governments
- 17 Local governments
- 2 Tribal representatives
- 8 Private companies
- 5 Non-profit /
trade organizations

Plus 25 Observers



How It Would Work



Pilot Launch October 2015

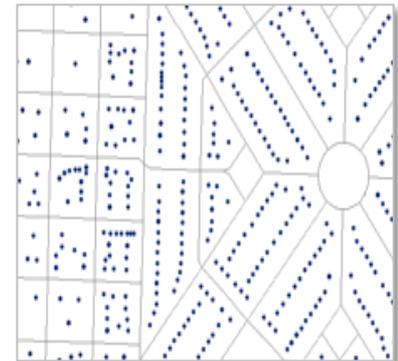
❖ Advisory Group Established – Key Stakeholders

❖ DOT Funded

❖ Goals

- Determine minimum content guidelines
- Explore workflows
- Understand best practices for address roll-up
- Assess technical feasibility
- Keep NAD in the public domain

	A	B	C	D	E	F
1	Name	Address	Address2	City	State	Zip
2	John Doe	123 Anystreet		Anycity	MN	12345
3	Betty Johnson	456 That Road	#108	Sometown	KY	67890
4	Tom Anderson	789 Broad Street		Dullsville	CA	23456
5	Sally Stevens	1011 Main Street	Unit 3	Pleasantville	NY	17890
6	Richard Townsend	1213 Mulholand Drive		Anywhere	WA	34567
7	Maria Sanchez	1415 Circle Road	Apt. 2	Sometown	NV	28901
8	Antoine Dodson	1617 Oregon Trail		Nowhere	FL	45678
9	Jane Doe	456 Anystreet	Unit 7	Anycity	MN	12345
10	Bart Johnson	123 That Road		Sometown	KY	67890



Pilot Results in Brief

- ❖ Identified the “haves” and “have nots”
 - 31 states plus DC have programs with varying degrees of completeness
 - Also Gila River Indian Community, Navajo Addressing Authority, Dept. of Navy¹
- ❖ Research on existing systems (e.g. OpenAddresses.io, Community TIGER)
- ❖ Identified minimum content guidelines
- ❖ Schema comparison
 - FGDC and CLDXF
 - State schemas: AR, AZ, MA, NC, NY, RI, UT, VA, VT, plus DC & counties
- ❖ Identified best geocoding & address list data sources



Minimum Content Guidelines – 3 Components

The Address itself

- Address Number
- Street Name
- Subaddress
- City/Town/Place
- County
- State
- Zip

Geographic Location of the address

- Lat/Long
- National Grid Coordinates

Metadata about the address

- Address authority
- Address source
- Address date
- Unique ID
- Type (residential, commercial, etc.)
- Placement (rooftop, driveway access, etc.)

NAD Schema

Customize Windows Help

Identify

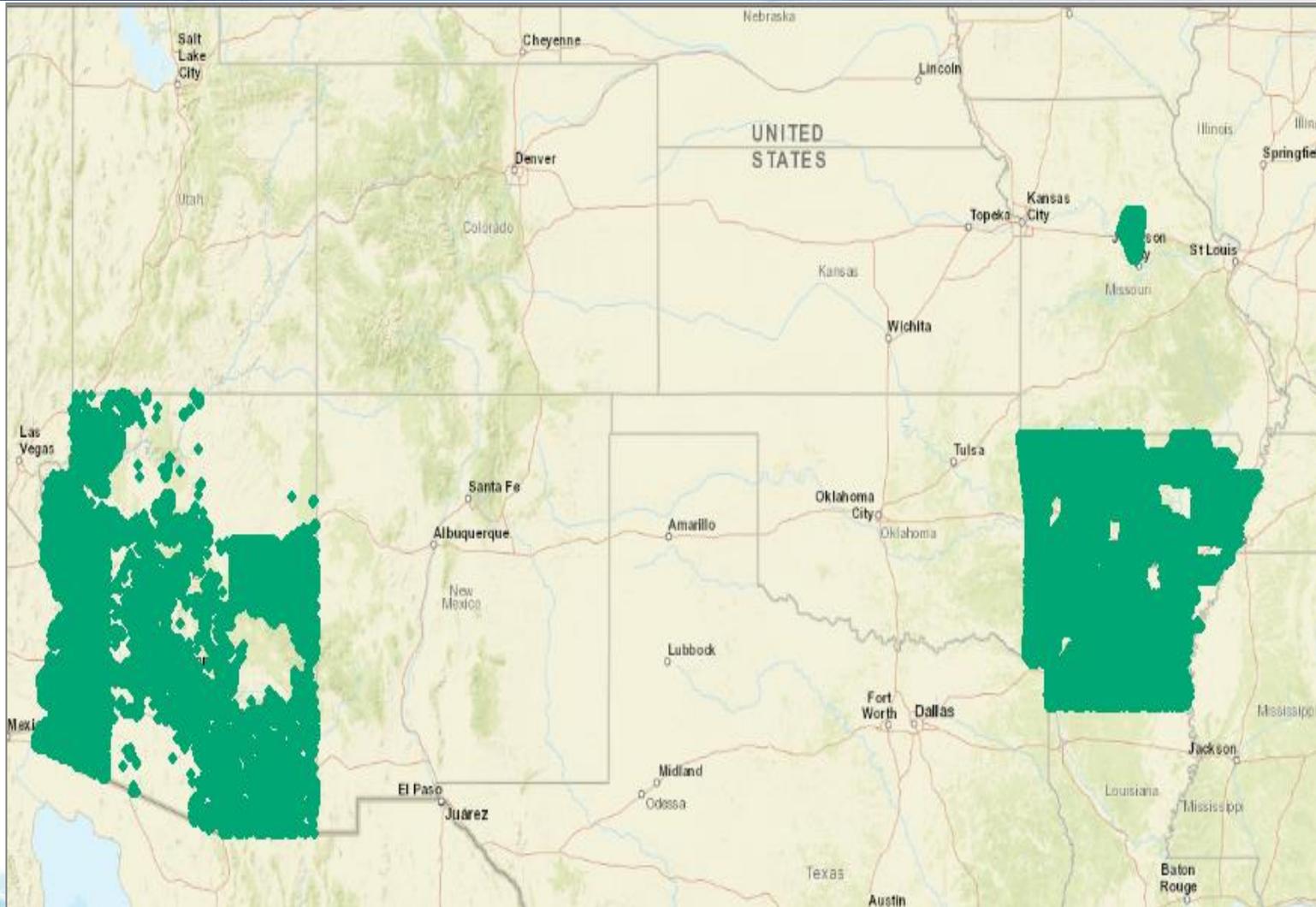
Identify from: <Top-most layer>

Location: -10,474,550.034 4,307,646.554 Meters

Field	Value
Shape	Point
State	AR
County	Washington
Incorporated Municipality	Fayetteville
Unincorporated Community	<null>
Neighborhood Community	<null>
Postal Community Name	<null>
ZIP Code	72701
Zip Plus 4 Addition	0500
Bulk Delivery ZIP Code	<null>
Bulk Delivery ZIP Plus 4 Addition	<null>
Street Name Pre Modifier (PRM)	<null>
Street Name Pre Directional (PRD)	South
Street Name Pre Type (STP)	<null>
Street Name Pre Type Separator (STPS)	<null>
Street Name (RD)	Keen
Street Name Post Type (STS)	Ln
Street Name Post Directional (POD)	<null>
Street Name Post Modifier (POM)	<null>
Address number prefix (HNP)	<null>
Address number (HNO)	1085
Address number suffix (HNS)	<null>
Landmark Name Part (LMKP)	<null>
Landmark (LMK)	<null>
Building (BLD)	<null>
Floor (FLR)	<null>
Unit (UNIT)	2
Room (ROOM)	<null>
Additional Location Information (LOC)	<null>
Milepost	<null>
Address Longitude	-94.09447
Address Latitude	36.05083
National Grid Coordinates	<null>
GUID	{CB827007-BDA2-48DE-B6F2-C
Address Type	Residential
Address Placement	Parcel - Centroid
Address Source	Arkansas GIS Office
Address Authority	Washington County
Unique Within	<null>
Date Last Updated	1/27/2014
Effective Date	<null>
Expiration Date	<null>



Pilot Participants Compiled Into NAD Schema



“Have Not” Status

- ❖ Goal was to find agencies (likely counties or tribes) that haven't yet created their addresses
- ❖ Wanted entity that was **interested, motivated, and willing to work with us**

✓ **Jackson County, AR**

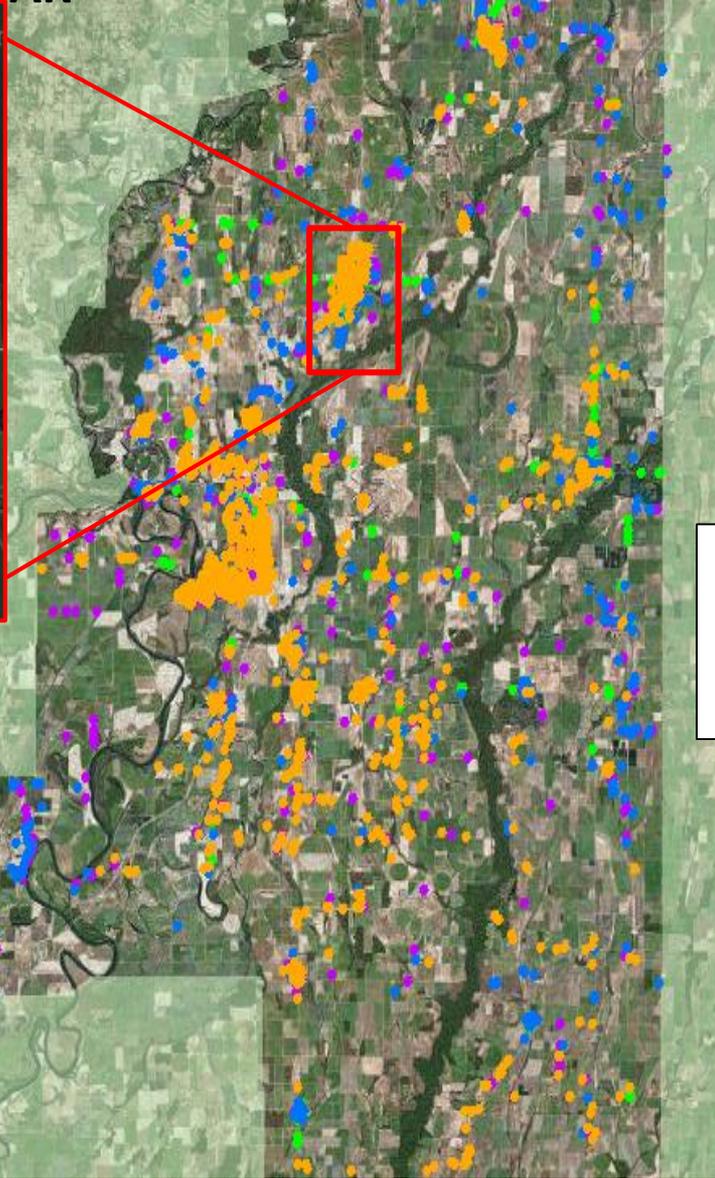
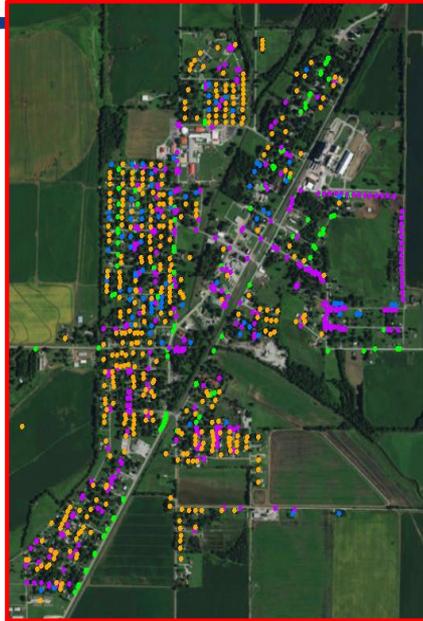
Jackson County, AR Geocoding Approach

- ❖ Multiple geocoding sources were used:
 - Melissa Data (commercial geocoding service)
 - County parcels
 - County road centerlines
 - Census road centerlines
- ❖ If an address wasn't matched in one source, the next source was used
- ❖ Achieved a 77% overall match rate from the 18,469 records

Final Jackson County Geocoding Results

Source	Total Records Matched	% Matched*
Melissa Data	7,073	38%
Parcel centroids	1,700	9%
County centerline	4,112	23%
Census/TIGER centerlines	1,347	7%
Totals	14,232	77%

Jackson County, AR



- GeoCode Source
- MelissaData
 - ParcelCentroid
 - Centerline
 - Census/Tiger

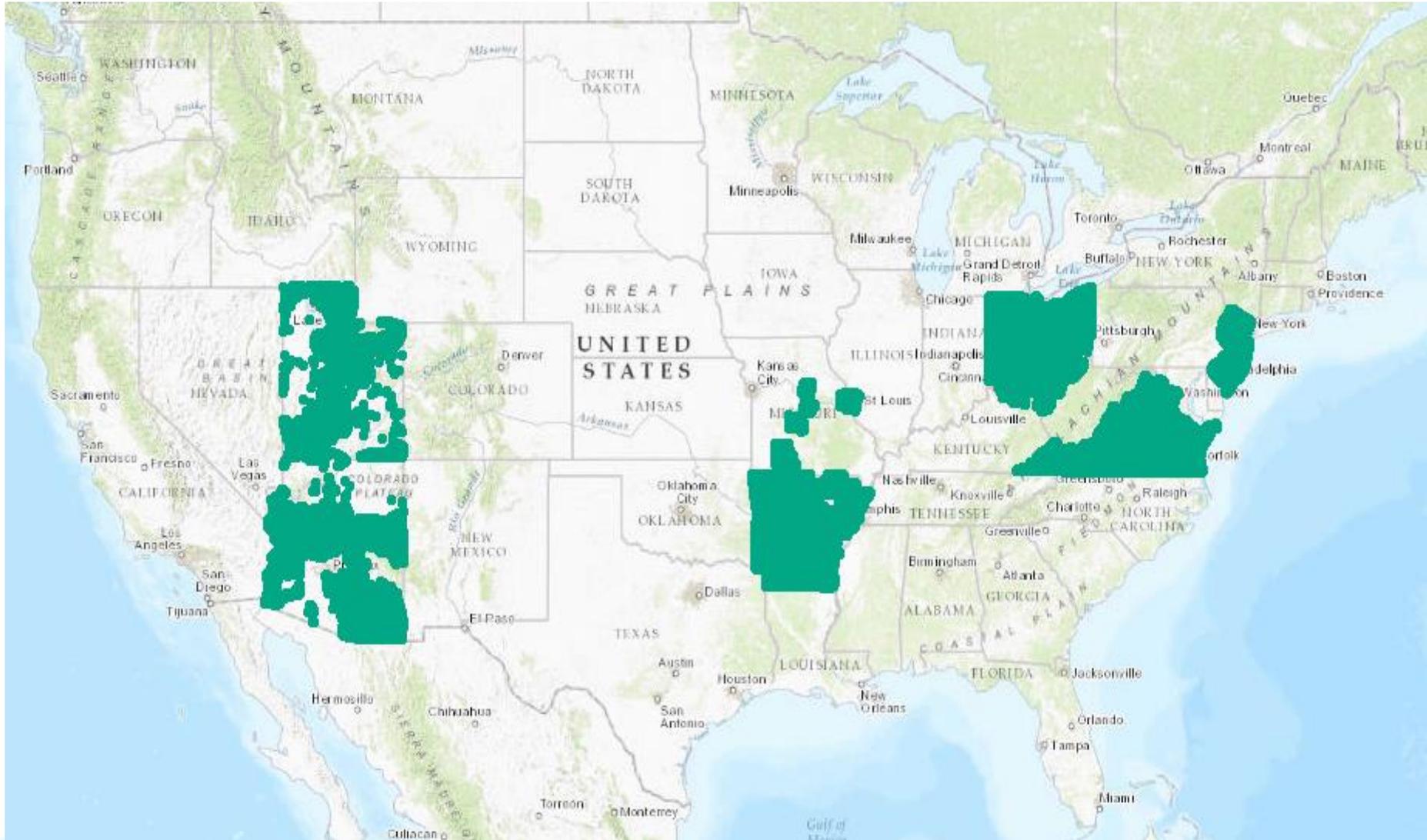
Preliminary Pilot Findings

- ❖ **Tribal participation** is going to be a **challenge**
 - Lots of outreach, no explicitly contributed data
 - Gila River data is part of AZ statewide collection
- ❖ Data sharing agreements to make data **publically available could be a challenge**
- ❖ **Aggregating existing statewide collections was straight forward**
- ❖ **The schema will likely evolve**, but needs to remain consistent with leading address schemas to allow for streamlined ETL

Coalition of the Willing

- ❖ Since the release of the minimum content guidelines and schema, 15 additional address programs volunteered to develop their own ETLs
 - District of Columbia
 - New Jersey
 - Ohio
 - Utah
 - Virginia
 - 9 additional counties and 1 city from Missouri (Locals Helping Locals)
- ❖ Recently received data from Colorado and Montana (not yet loaded into NAD)
- ❖ Massachusetts, New York, and North Carolina are in the queue
- ❖ Seeking other volunteers through NSGIC

16.8 Million Addresses



What's Next

- ❖ Continue the Coalition of the Willing
- ❖ Choose platforms for development and production
- ❖ Identify funding for continued development
- ❖ Make the data available!
- ❖ Launch Data Challenge for “have nots”

Challenges

- ❖ DOT and Census currently lack FY17 funding for NAD development and support
- ❖ Census to propose FY18 funding initiative
- ❖ Time needed to re-host the Pilot NAD

- ❖ Can an agency/agencies fund a NAD development or support activity for FY17?

Draft Theme Definition

Mark Lange

*U.S. Census Bureau
Subcommittee Co-Chair*

Steve Lewis

*U.S. Dept. of Transportation
Subcommittee Co-Chair*

Draft Theme Definition

Address

The words, numbers, or both used to describe a location by reference to a geographic location and potentially associated with a thoroughfare or landmark. An address may specify a point of postal delivery.

Draft Theme Definition

❖ FGDC Address Standard Definition

Specifies a location by reference to a **road or landmark**

OR

Specifies a point of **postal delivery**

1.4.3 Definition of “Address”

This standard proposes a new definition of "address":

An address specifies a location by reference to a thoroughfare or a landmark; or it specifies a point of postal delivery.

This definition differentiates addressing from the two other types of spatial referencing systems, coordinate reference systems, and linear reference systems. The difference rests, not on what the systems locate, but on what they refer to in order to specify a location.

Draft Theme Definition

❖ What it Excludes

Email and other computer system addresses

Address occupants and mail recipients

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Draft Theme Definition

❖ Expanded scope

Specify a location by reference to a **geographic location**

May be associated with a **road or landmark**

May specify a point of **postal delivery**

Draft Theme Definition

FGDC Address Standard Definition

An address specifies a location by reference to a thoroughfare or a landmark; or it specifies a point of postal delivery

Distributed for Consideration

The words, numbers, or both used to describe a location **by reference to a geographic location** and potentially associated with a thoroughfare or landmark. An address may specify a point of postal delivery.

Alternative 1

The data elements used to specify a location by reference to a thoroughfare or landmark. An address may specify a point of postal delivery.

Alternative 2

The words, numbers, or both used to describe a location by reference to a geographic location and potentially associated with a thoroughfare or landmark. An address may specify a point of postal delivery. An address **does not include email, computer system addresses, address occupants, or mail recipients.**

Subcommittee Charter

❖ Purpose and Scope

❖ Potential Subgroups

❖ Examples of subgroups on other FGDC subcommittees:

- Acquisition Management Subgroup
- Technical Management Subgroup
- Program Management Subgroup

Next Steps and Assignments

- ❖ User Requirements Workshop – February 2017

- ❖ Next Meeting Agenda

 - Charter Review

 - Vote on Definition and Charter

 - Other Agenda Items?

- ❖ Future Subcommittee Meetings

 - 2nd Wednesday of the Month

NEXT MEETING: Wednesday, January 11th

1:00-2:30 pm Eastern

Thank You



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Steve Lewis
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202-366-9223

Draft Theme Definition

Example Theme Definitions

Real Property

The spatial representation (location) of real property entities, typically consisting of one or more of the following: unimproved land, a building, a structure, site improvements and the underlying land. Complex real property entities (that is "facilities") are used for a broad spectrum of functions or missions. This theme focuses on spatial representation of real property assets only and does not seek to describe special purpose functions of real property such as those found in the Cultural Resources, Transportation, or Utilities themes.

Cultural Resources

Features and characteristics of a collection of places of significance in history, architecture, engineering, or society. Includes National Monuments and Icons.

Draft Theme Definition

Example Theme Definitions

Biota

Pertain to, or describe, the dynamic processes, interactions, distributions, and relationships between and among organisms and their environments.

Cadastral

Past, current, and future rights and interests in real property including the spatial information necessary to describe geographic extents. Rights and interests are benefits or enjoyment in real property that can be conveyed, transferred, or otherwise allocated to another for economic remuneration. Rights and interests are recorded in land record documents. The spatial information necessary to describe geographic extents includes surveys and legal description frameworks such as the Public Land Survey System, as well as parcel-by-parcel surveys and descriptions. Does not include Federal government or military facilities.