



# **NYS Census Affiliates Meeting**

*June 4, 2014*

GIS Program Office

NYS Office of Information Technology Services

# Today's Agenda

- What is the SAM Project?
- Background
- Project status
- Files provided to counties
- Data maintenance
- US Census Bureau Partnership

# **SAM Project Objective**

***Create a statewide authoritative  
address point database to support  
Next Generation 9-1-1  
and other purposes***



Phone Number

Automatic Number Identification (ANI)



Add Street Address

Automatic Location Identifier (ALI)



Add Emergency Service Zone

Master Street Address Guide (MSAG)



Look up Police, Fire, EMS

Emergency Service Provider  
Lookup Table

# Current Land Line Tabular look-up



Phone Number  
or email, text, video  
and **X, Y**  
(no Address)

# Next Generation ~~Mobile Phone~~ Device



Add Street Address  
**NYS Address Point File**

OCS



# Many Uses for Address Data Beyond 9-1-1 Dispatch

- Sex offender placements
- Sales tax collection and distribution
- Environmental permitting
- Welfare to Work programs
- School bus routing
- Emergency response planning & recovery
- Tax fraud analysis
- Statewide Enterprise Geocoding

# Background

- NYS GIS Program Office
  - 10+ years building GIS Address Points
  - Awarded NTIA Broadband Mapping supplemental funds
- NYS 9-1-1 Coordinators
  - Understood NG 9-1-1 will **require** GIS data
  - Desired a Statewide Master Address file
- Big Picture
  - *Huge range of needs for address data statewide*
  - *One master address point database*
  - *Building to highest level requirements (i.e. 9-1-1) will support all lower requirements*
  - *Eliminate duplication of effort*

# A timely partnership opportunity!



## So began the Street Address Mapping (SAM) Project

# Common Goals

- Address point data will:
  - *Support 9-1-1 dispatch and NG 9-1-1*
  - *Support high-quality geocoding*
  - *Be publically available for widespread uses*
  - *Contain no personal or sensitive information*
  - *Contain unique IDs*
- Build to NENA Standards
- Reduce data build and maintenance costs
- **Do it right, do it once**

# Statewide Address Point Build: 2 Stages

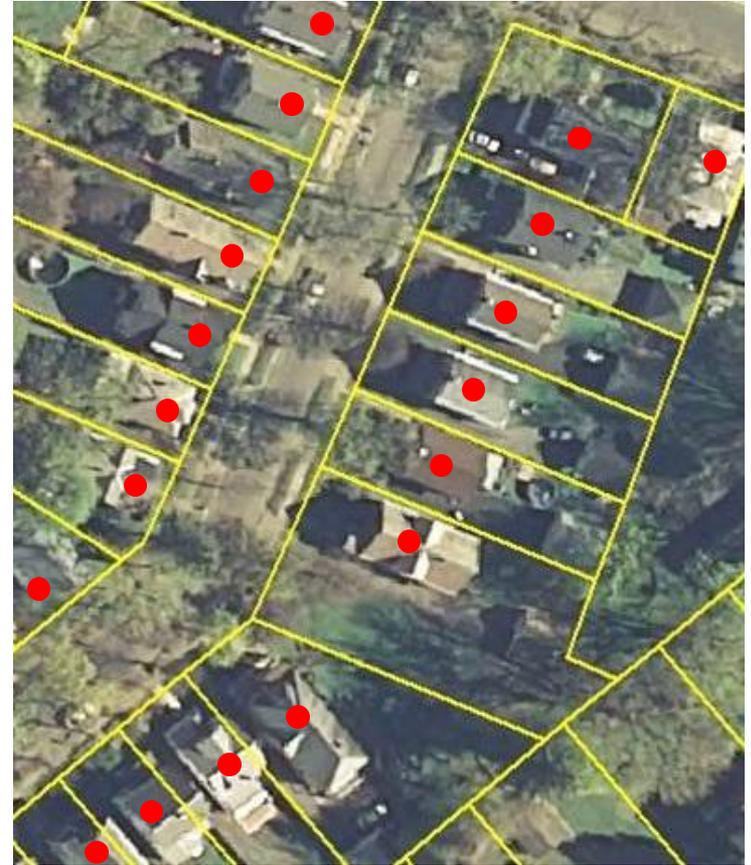
## Stage 1:

### State contracts for:

- “Principal” (main structure) point on building footprint
- Parcel centroids for vacant addressed parcels
- Addresses in draft NENA standard

### State in-house tasks:

- Outreach to counties for data
- QA/QC of data deliverables



**Stage 1**  
**Building Rooftops**  
**Centroids of Vacant Parcels**

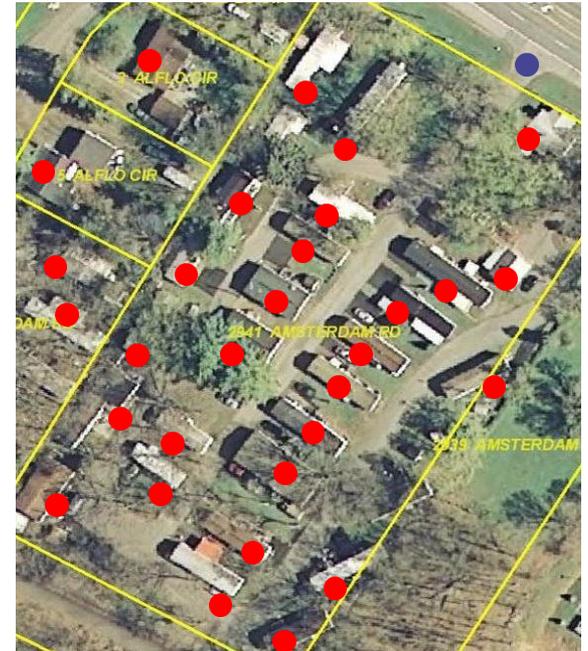


# Statewide Address Point Build: 2 Stages

## Stage 2:

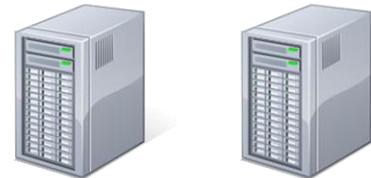
Counties use NENA standards to:

- **Locate** addresses identified in exception report
- **Add new points**
- **Refine** locations
- Map **subaddresses**



State provides:

- Data maintenance tools
- Data hosting/distribution services





# Developing the Partnership

- Leadership meetings
- Jointly identified:
  - Common goals
  - Individual strengths
  - Appropriate roles
  - Potential problems
  - Needed standards
  - Other stakeholders
- Developed an outreach plan



# Stakeholder Outreach Meetings

- Regional NYS 9-1-1 Coordinator Meetings
- County Real Property Tax Directors
- NYS Association of Counties
- NYS GIS community
- County/Local IT Directors
- NENA
- US Census Bureau
- CAD vendors / consultants
- GIS software vendors



# Follow Up with Individual Counties

- Initial information collection
  - Contact sheet
  - Questionnaire
- On site meetings with County-level stakeholders
- Post meeting
  - Sample data
  - Source Usage Document
  - Data Usage Agreement
- Pilots
  - Data Build
  - QA/QC







# SAM Contract

- Intrado/GDR team selected
- Kickoff meeting March 18, 2013
- Funds expire September 30, 2014
  - Just extended to January 31, 2015 !!
- Deliverable schedule by county
  - Projected total of 5 million principal address points
  - Schedule order is flexible
- Intrado/GDR providing available subaddresses
- **\$2 million investment in core 9-1-1 GIS data**

intrado®

**GDR**  
GIS Data Resources, Inc.



# Delivery Acceptance

- County-wide review of:
  - Schema compliance
  - Domain values
- ANSI statistical sample
  - Random selection of points to be reviewed
  - Validate positional accuracy
  - Validate attribute accuracy
  - Tightened inspectional only allows 18 errors
- Acceptance/rejection required within 10 days of delivery
- ***Approximately one County delivered every 5-7 days***



# Files Provided to Counties

# Address Points Deliverable

(symbolized by Point Type)



# Address Points Deliverable

(symbolized by Point Type)



# Spatially Invalid Address Points

(addresses geocode only to street centerlines)



# Spatially Invalid Address Points

(addresses geocode only to street centerlines)



# Spatially Invalid Address Points

(addresses geocode only to street centerlines)



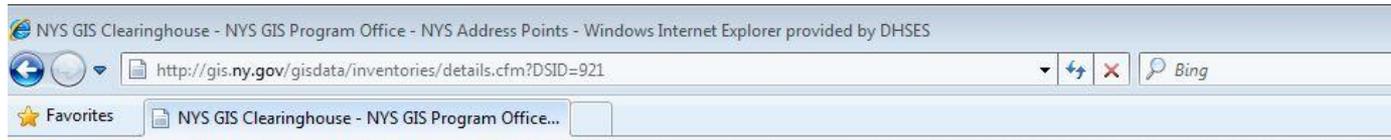
# Exception Report

(addresses do not geocode to parcels or centerlines)

	A	B	C	D	E	F
1	Address	City	State	ZipCode	SOURCE	REASON
2	200 Industrial Park	Bloomfield	NY	14469	Business Address	Address could not be geocoded to NYS Centerlines or working address points
3	68 Picture Book Park West	Bloomfield	NY	14585	Business Address	Address could not be geocoded to NYS Centerlines or working address points
4	2095 Cdga Hopewell Townline Rd	Canandaigua	NY	14424	Business Address	Address could not be geocoded to NYS Centerlines or working address points
5	2180 Cdga Hopewell Townline Rd	Canandaigua	NY	14424	Business Address	Address could not be geocoded to NYS Centerlines or working address points
6	6537 Mountain Side Dr	Canandaigua	NY	14424	Business Address	Address could not be geocoded to NYS Centerlines or working address points
9	2794 Manchester Hopewell Townline Rd	Clifton Springs	NY	14432	Business Address	Address could not be geocoded to NYS Centerlines or working address points
10	3057 Manchester Hopewell Townline Rd	Clifton Springs	NY	14432	Business Address	Address could not be geocoded to NYS Centerlines or working address points
11	3456 Manchester Hopewell Townline Rd	Clifton Springs	NY	14432	Business Address	Address could not be geocoded to NYS Centerlines or working address points
12	4682 State Route 96a	Geneva	NY	14456	Business Address	Address could not be geocoded to NYS Centerlines or working address points
13	34 Parklawn Apts	Honeoye	NY	14471	Business Address	Address could not be geocoded to NYS Centerlines or working address points
14	General Delivery	Port Gibson	NY	14537	Business Address	Address could not be geocoded to NYS Centerlines or working address points
15	1501 State Route 96	Victor	NY	14564	Business Address	Address could not be geocoded to NYS Centerlines or working address points
16	1600 Moseley Rd	Victor	NY		Business Address	Geocoded Outside County
17	213 Eastview Mall # 149a	Victor	NY	14564	Business Address	Address could not be geocoded to NYS Centerlines or working address points
18	501 Eastview Mall # 132	Victor	NY	14564	Business Address	Address could not be geocoded to NYS Centerlines or working address points
19	502 Great Brook	Victor	NY	14564	Business Address	Address could not be geocoded to NYS Centerlines or working address points
24	100 Bloomfield Grns	Bloomfield	NY	14469	Residential Address	Address could not be geocoded to NYS Centerlines or working address points
25	16 Picture Book Park West	Bloomfield	NY	14585	Residential Address	Address could not be geocoded to NYS Centerlines or working address points
26	17 Picture Book Park West	Bloomfield	NY	14585	Residential Address	Address could not be geocoded to NYS Centerlines or working address points
27	18 Picture Book Park West	Bloomfield	NY	14585	Residential Address	Address could not be geocoded to NYS Centerlines or working address points
28	19 Picture Book Park West	Bloomfield	NY	14585	Residential Address	Address could not be geocoded to NYS Centerlines or working address points
29	20 Picture Book Park West	Bloomfield	NY	14585	Residential Address	Address could not be geocoded to NYS Centerlines or working address points
30	200 Industrial Park	Bloomfield	NY	14469	Residential Address	Address could not be geocoded to NYS Centerlines or working address points



# Public Access to SAM Data



## GIS Data Set Details

Data Set Name	Description	Theme	Metadata
NYS Address Points	Point files of addressed properties in New York State. Data is not complete statewide. Data is copyright protected.	Cadastral (tax parcels) Miscellaneous	n/a

## Supporting Documentation

- [Data Dictionary-Streets and Address Points \(Revised 01/14\)](#)
- [Geocoding - ESRI Instructions](#)

Web Service

A web service of the SAM Address Point file is available here: <http://gisservices.dhSES.ny.gov/arcgis/rest/services>. The web service named SAM\_Address\_Points\_Symbolized has different symbology for each of the 5 PointType values (see image). The web service named SAM\_Address\_Points has all points symbolized the same way. The SAM Address Point files are projected in Web Mercator (Auxiliary Sphere).

### Address Point Type

- Rooftop
- Primary Structure Entrance
- Driveway Entrance
- ▲ Parcel Centroid
- Miscellaneous

Geocoding service

If the purpose of downloading the address points is for geocoding, NYS ITS has a publicly available geocoding service which includes the address points along with other layers. The geocoding service is named NYS\_Points\_Streets and can be found here: <http://gisservices.dhSES.ny.gov/arcgis/rest/services>.

The NYS Address Point File is changing! Please see the [SAM project](#) about future updates to the statewide address point file.

Direct Download

## Files available to the Public

Files	Download	Metadata
Address Points - SAM	<ul style="list-style-type: none"> <li> <a href="#">GEODATABASE</a></li> <li> <a href="#">SHAPE</a></li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Metadata</a></li> <li><a href="#">Metadata</a></li> </ul>

<http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=921>



# Public Geocoding Service

## Detailed documentation on Locaters and Web Services

### The Locaters

The first composite locator (SAM\_ZipName\_Composite) is made up of the following set of locaters which are most likely to return a high quality hit. The locaters are listed in the order in which they will be accessed along with a brief description of the locator's source data. These six locaters will generate the majority of the results when geocoding addresses.

### SAM\_ZipName\_Composite

Locator Name	Source Data	Description
1A_SAM_AP_ZipName	SAM Address Points	SAM rooftop address points (as it is developed) using the postal zip code name for the city name in the locator.
1B_SAM_AP_CTName	SAM Address Points	SAM rooftop address points. The city or town name is used for the city name in the locator
1C_SAM_AP_PlaceName	SAM Address Points	SAM rooftop address points. The city name is populated using the NYS Villages and Indian Reservations, the Census Designated Places and Alternate Acceptable Zip Code Names from the USPS. These names do not exist everywhere so there will be a limited number of points in this locator.
1D_SAM_LandmarkAliasName	SAM Address Points	This allows for geocoding to the name of a landmark instead of the street address. (e.g. NYSDOT Hornell NY, 14843) The street address of that landmark will be returned. This locator has been temporarily disabled while bugs are worked out.
2A_AP_ZipName	Parcel Address Points	Parcel address point using the postal zip code name for the city name in the locator.
3A_SS_ZipName	NYS Street Segments	NYS Street Segments dataset using the postal zip code name for the city name in the locator. The location is interpolated from an address range on the street segment. The city name can be different for the left and right sides of the streets.

Any address that does not successfully geocode to the first composite should then be run through the second composite locator (Fallback\_Locaters\_Composite). This composite locator is made up of the following locaters.

### Fallback\_Locaters\_Composite

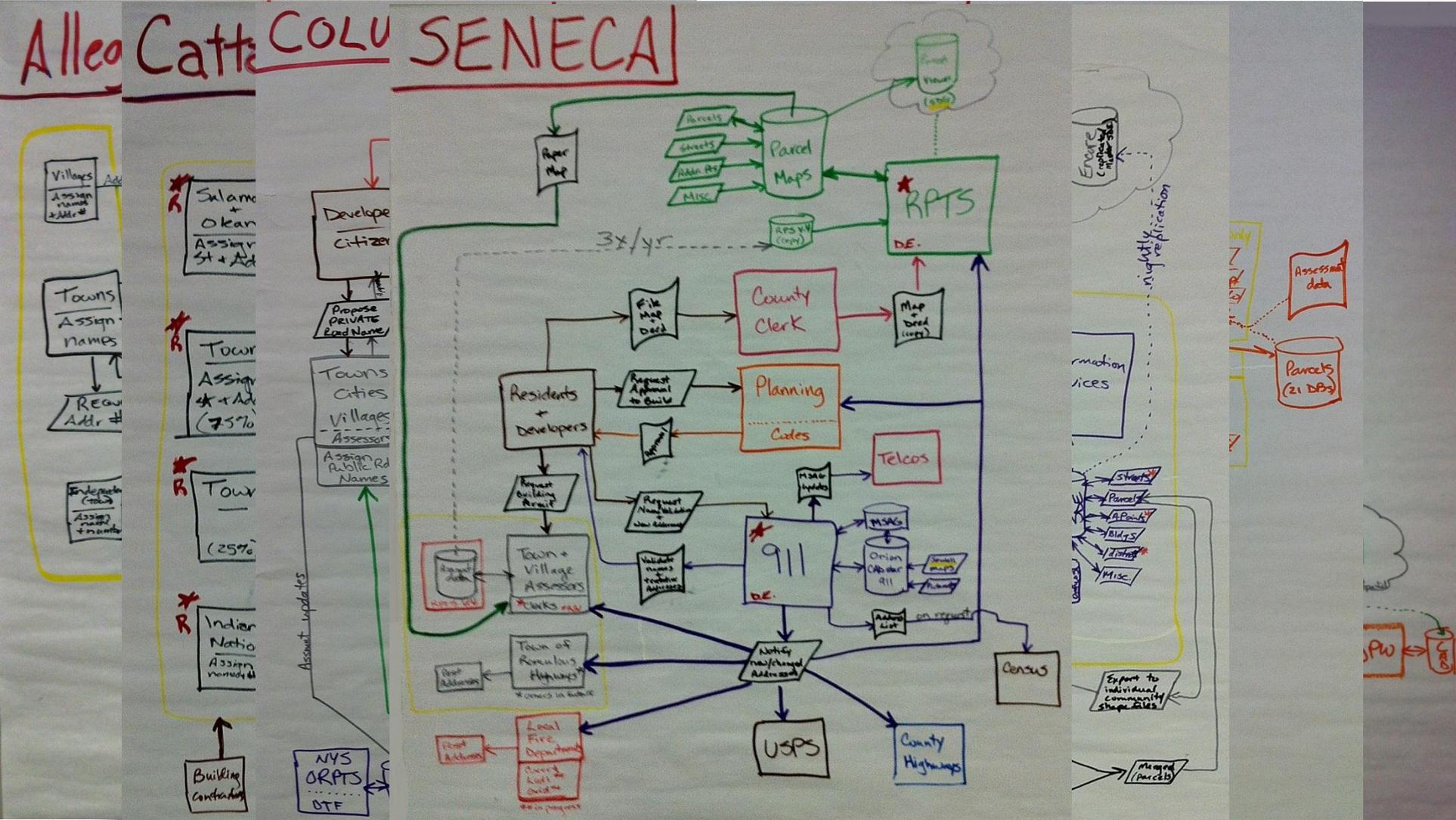
Locator Name	Source Data	Description
2B_AP_CTName	Parcel Address Points	Parcel address point using the city or town name for the city name in the locator.
2C_AP_PlaceName	Parcel Address Points	Parcel address points. The city name is populated using the NYS Villages and Indian

# Data Maintenance

# Data Maintenance Discussions

- Onsite meeting with stakeholders
- Overview of data build, QA, & post processing
- Address data flow discussion
  - Who assigns street names? Addresses?
  - What County/local gov't digital data contains addresses?
  - Where are street and address changes being shared?
- Strategize data maintenance
  - Do they have maintenance tools ?
  - Are they interested in the NYS-provided tools?
- Detailed review of delivered data

# Mapping address data flow in the County



# GeoComm Data Maintenance Tool

- Web-based data maintenance tool - GeoLynx
- No cost for counties and select state agencies to use
- Edit data directly
  - Editing limited by geographic footprint
  - Add, delete, or reposition address points
  - Edit attributes on address points and streets
  - Add, delete or realign streets\*
- Notification only option
  - Provide information/attachments for needed changes
  - Edits outside of your geographic footprint

# US Census Bureau Partnership



# Goal of the Pilot

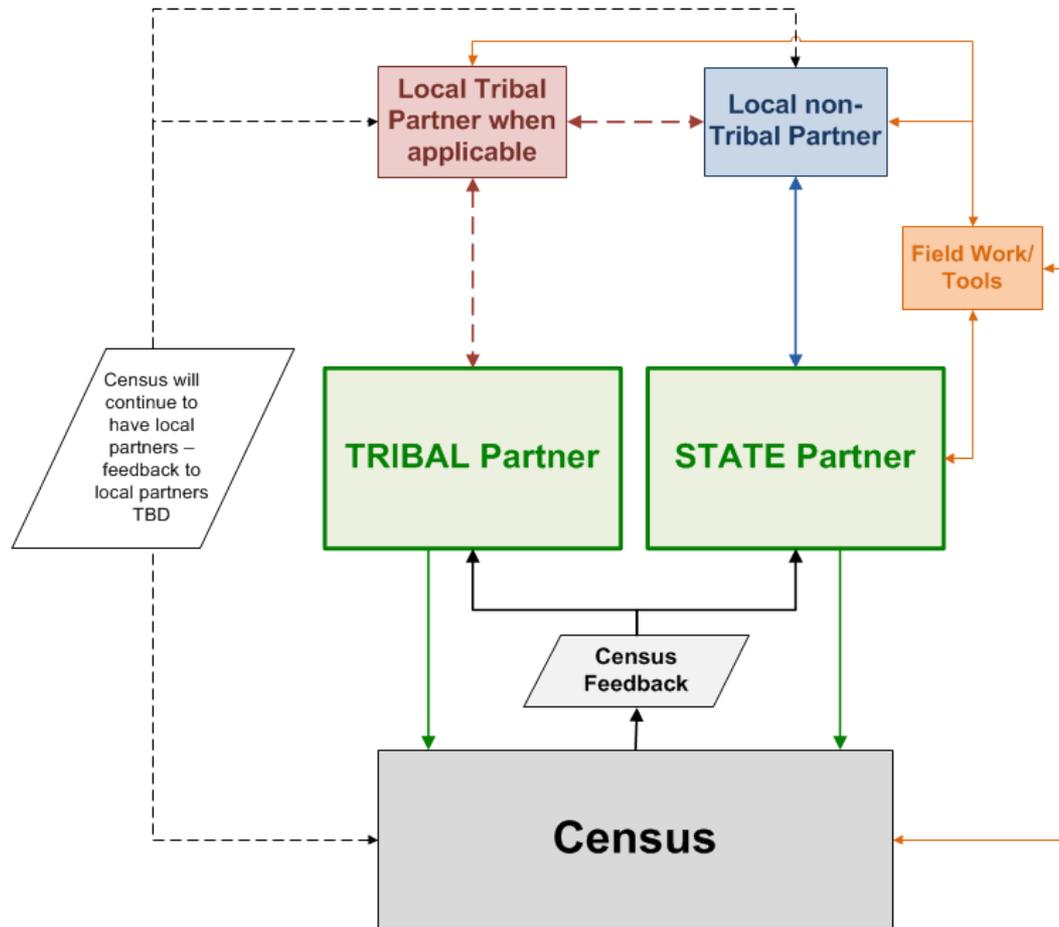
***Create a formalized model to allow for the development, maintenance, and bi-directional (state-local, state-federal, and tribal-federal) sharing of high quality, multiple use, address data***

# Pilot Objectives

- 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



# NYS State of Affairs *Before* the Pilot

- Wanted to share GIS Data with Census
- MOU executed in 2005
- Statewide streets (FGDC standard)
- Statewide address points (parcel centroids) in 2010
- Updates from contractor and local government partners
- One way data sharing

# Address Summit Pilot

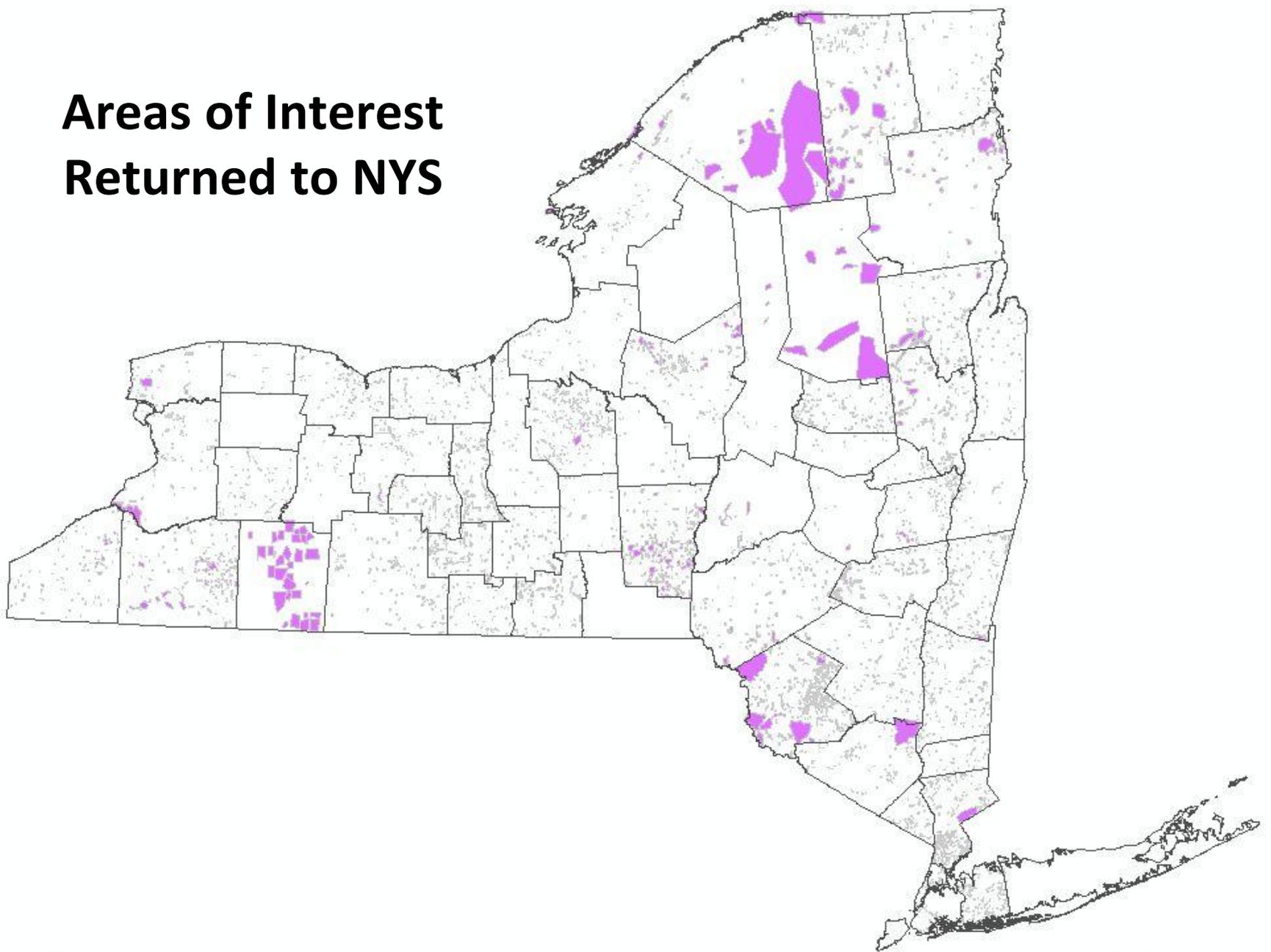
- One year timeline to develop and test the model
- Opportunity for NYS to receive address data!!
- Leveraged SAM Project outreach activities
  - Local government stakeholder meetings
  - Data usage agreements
  - Sample data
- Address data provided to Census in July 2012
  - Parcel centroid address points (statewide)
  - Structure based address points (one county)
  - Subaddress points (one county)

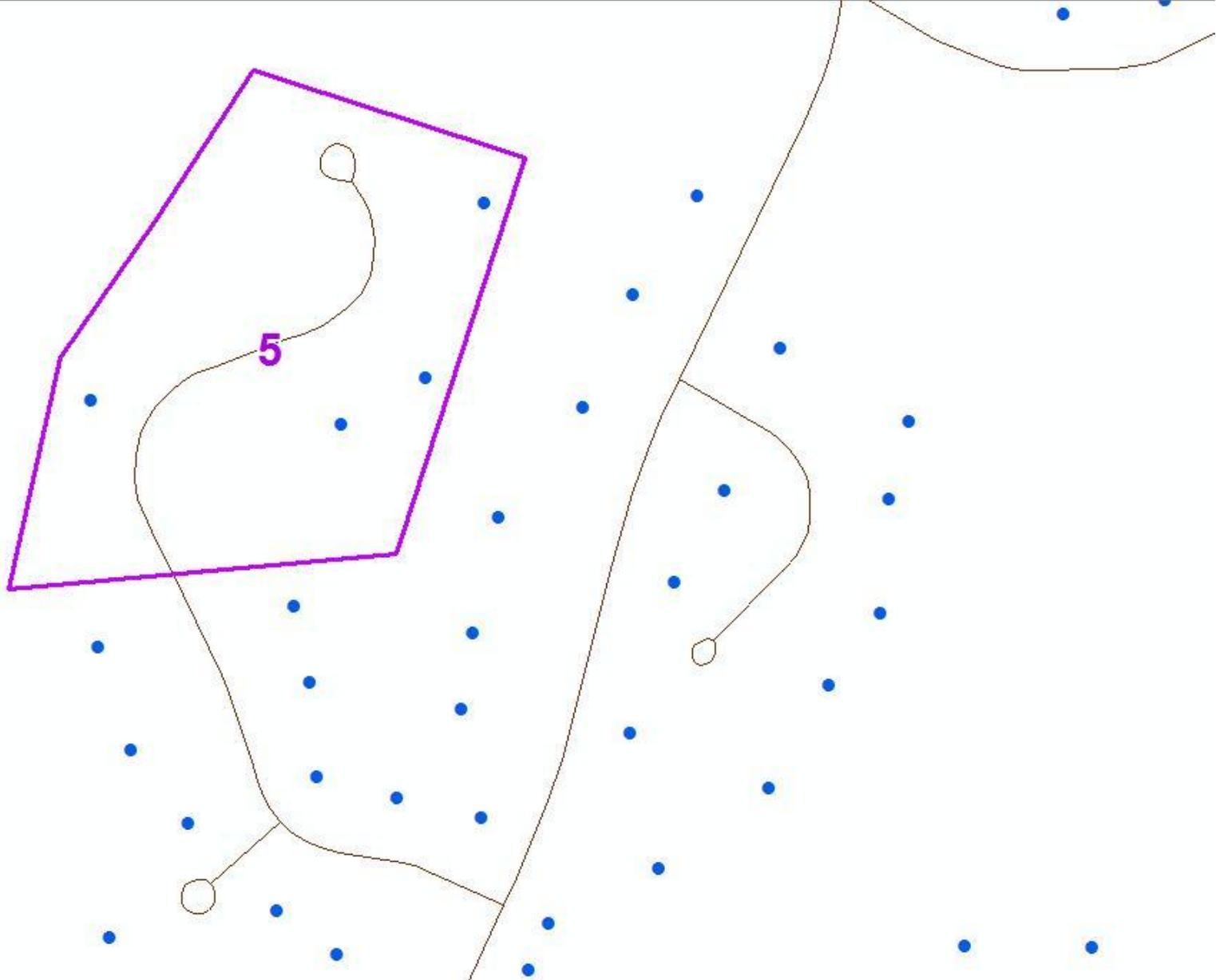
← **NENA  
Std**

# Census Feedback

- Returned in October 2012
- Most valuable feedback required Title 13 paperwork
  - Required highest elected official signature
  - Sent directly to HEO on August 3
  - New York State never got paperwork signed
- NYS evaluated only non-Title 13 products
- Areas of Interest files with discrepancy counts most useful (REC 1)

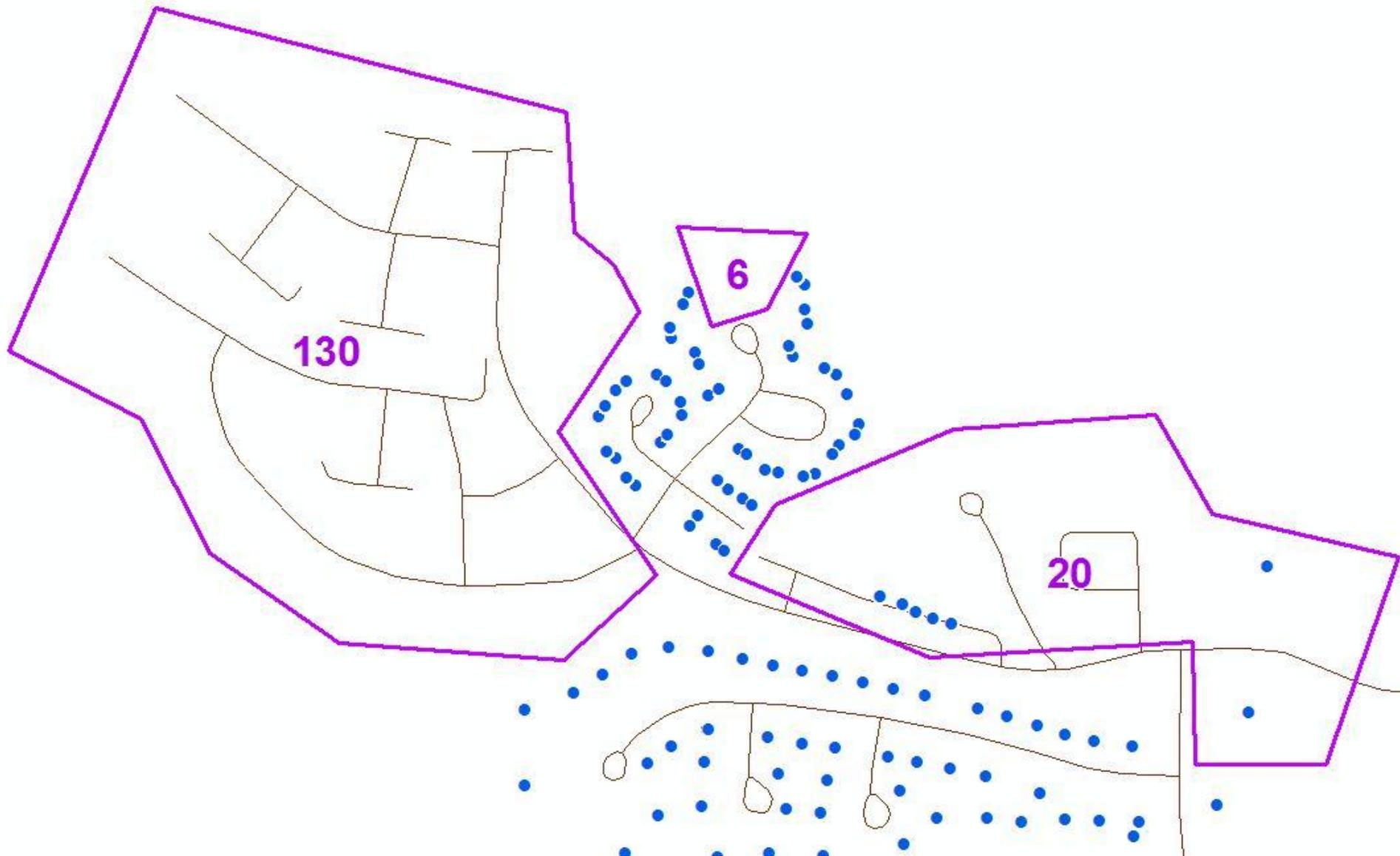
# Areas of Interest Returned to NYS



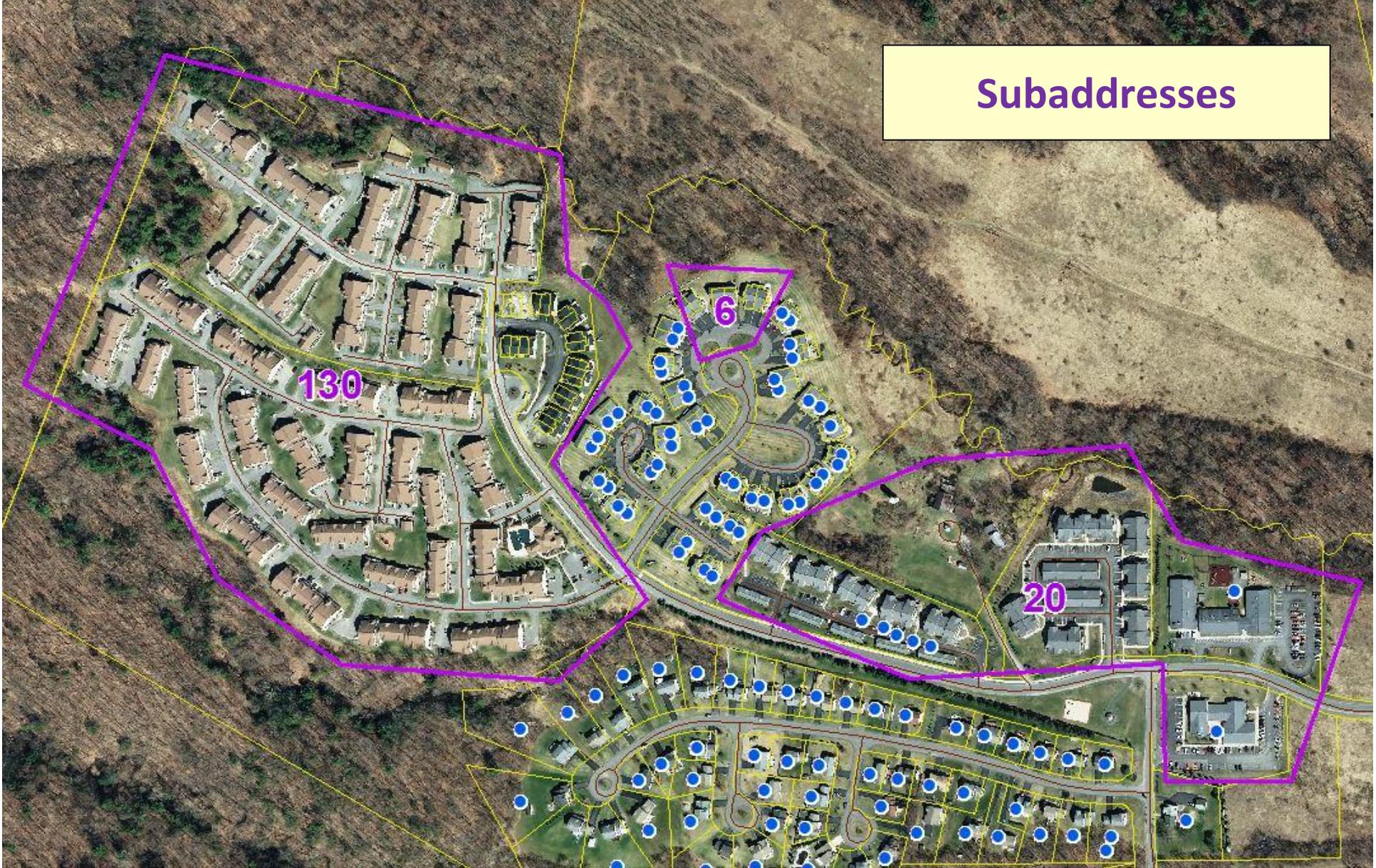


# New Construction





# Subaddresses



# FY2013 GSS Initiative

- Initial GSS-I participant in fall 2012
- Provided structure based address points to test GSS-I systems and tools
- Participated in the April 2013 Census Addressing Conference
- Regional Office data request in May 2013
  - Sought outreach guidance knowing of pilot participation
  - Only two weeks to obtain data!
- Communication concerns
  - Between Census Pilots
  - Between Census HQ & Regional Offices
- NYS requested call with HQ & NYRO

# Moving From Pilot to Reality

- June kick off meeting (NYS, Census HQ & NYRO)
  - Share information about GSS-I and SAM Project
  - Update existing MOU
  - Data receipt responsibility moved from HQ to NYRO
- Continued monthly meetings for administrative items
- Separate NYS and NYRO monthly meetings
  - Included NYS Data Center representatives
  - Local government outreach planning
  - Identify opportunities for joint outreach activities
  - Discuss GSS-I data needs & available SAM Project data
  - Census GPP program contacts database extract
- Coordinated GSS-I data collections continue

# Want to Stay Informed?

- SAM Newsletter (bimonthly email)
- SAM Project Webpage:
  - <http://www.dhSES.ny.gov/ocs/streets>
  - Address Points Schema
  - County data build list
  - Status maps
  - Presentations
- NYS 9-1-1 GIS Workgroup
  - Bimonthly webinar on 3<sup>rd</sup> Thursday at 2pm
  - Over 60 NYS 9-1-1 and NYS GIS professionals
  - Review/discuss NENA GIS-related standards

# Thank you!

SAM Project Web Page:

<http://www.dhses.ny.gov/ocs/streets>

SAM Address Point Data:

<http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=921>

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