



Office of Information
Technology Services

Street and Address Maintenance (SAM) Program Update for the NSGIC Address Committee

NYS GIS Program Office

June 18, 2015

SAM Project Objective

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

Background

- **NYS GIS Program Office**
 - 10+ years building GIS Address Points
 - Awarded Broadband Mapping supplemental funds
- **NYS 9-1-1 Coordinators**
 - Understood NG 9-1-1 will **require** GIS data
 - Desired a Statewide Master Address file
- **A timely partnership opportunity!**

GOALS:

- One master address point database built to NENA Standards
- Address point data will:
 - *Support 9-1-1 dispatch and NG 9-1-1*
 - *Support high-quality geocoding/address matching*
 - *Be publically available for widespread uses*
 - *Contain no personal or sensitive information*

SAM Address Points

Stage 1: Build

State contracted for:

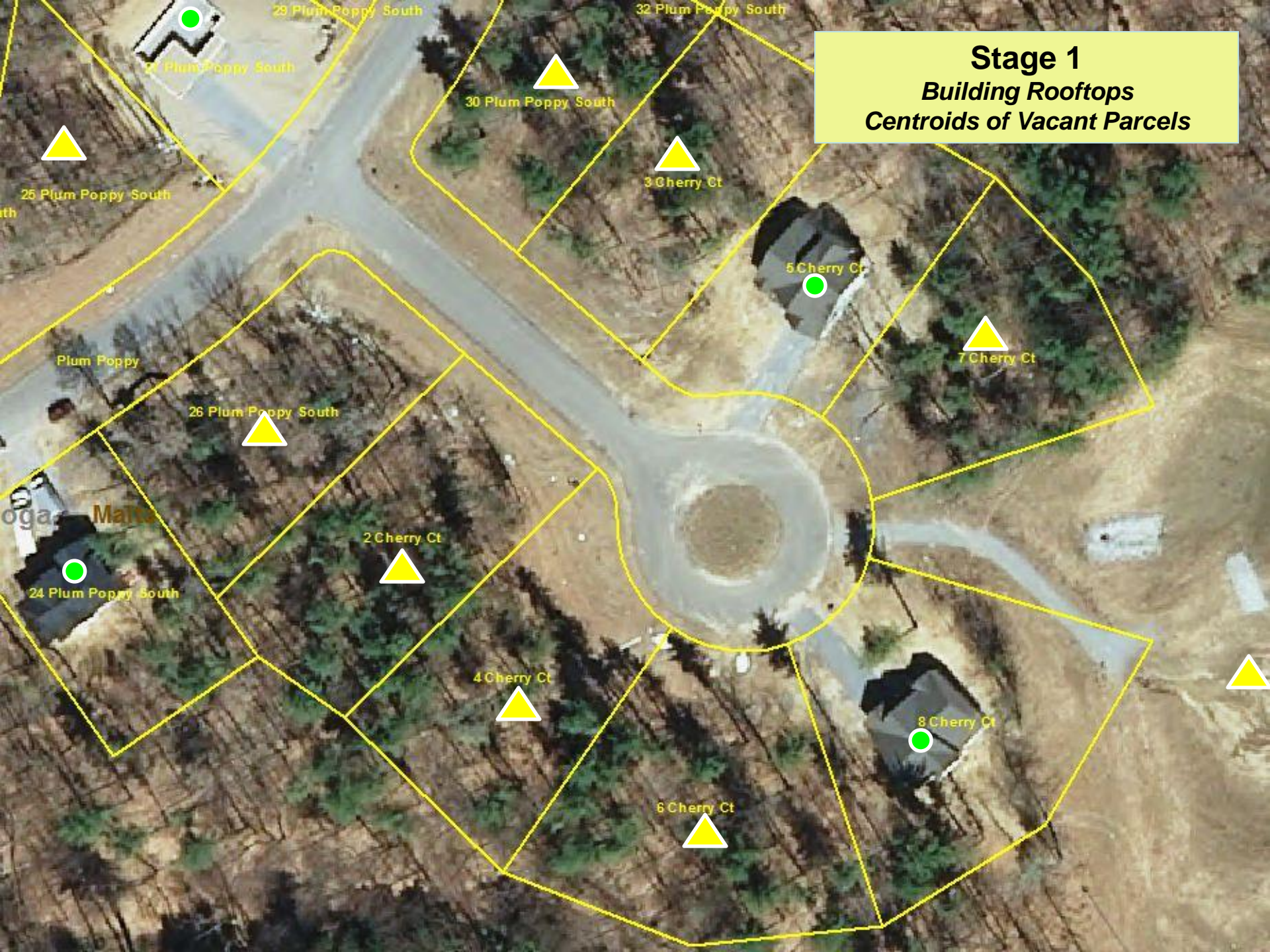
- “Principal” (main structure) point on building footprint
- Parcel centroids for vacant addressed parcels
- Addresses in draft NENA standard

State in-house tasks:

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



Stage 1
Building Rooftops
Centroids of Vacant Parcels



Communicate! Communicate!

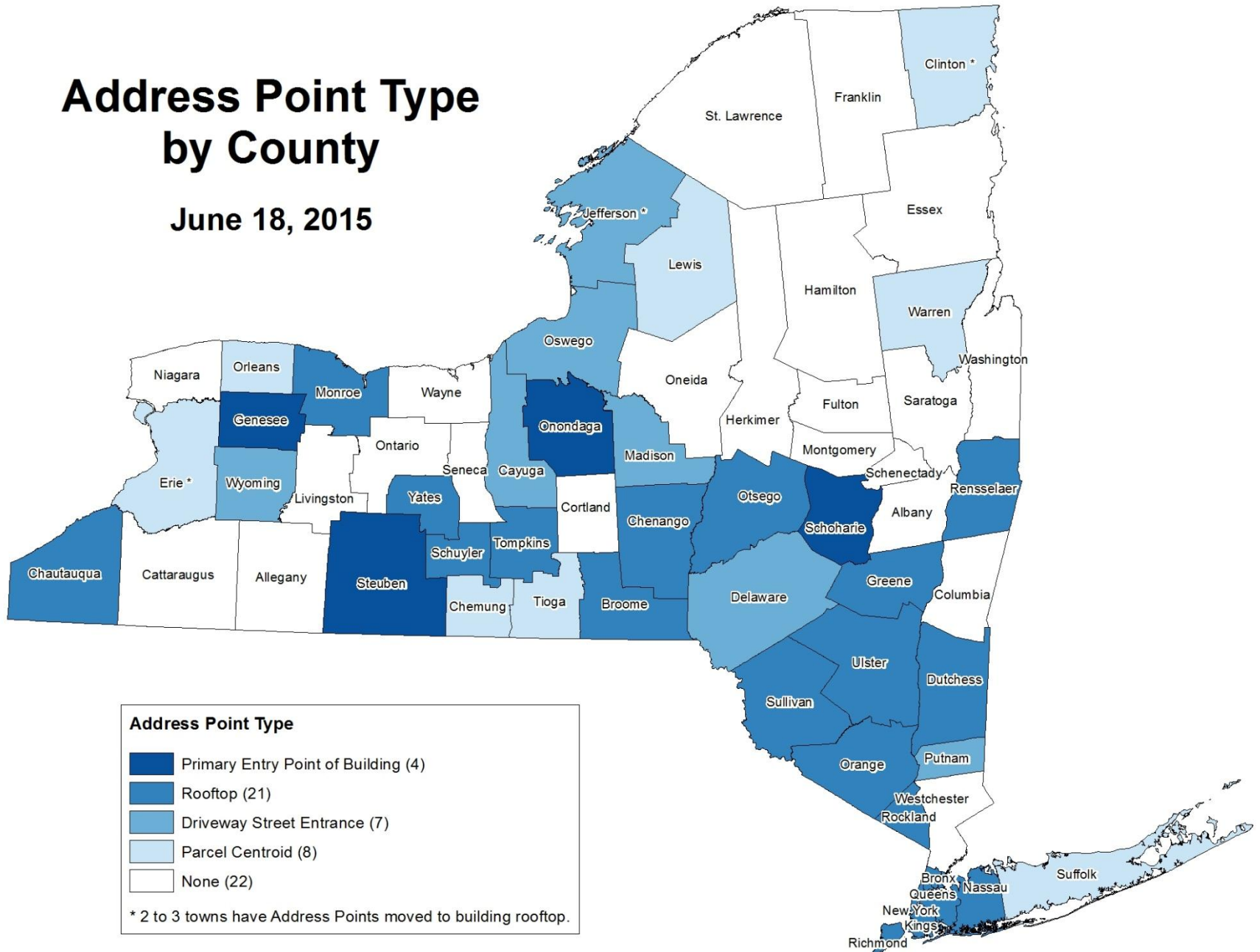
Stakeholder Outreach Meetings

- Regional NYS 9-1-1 Coordinator Meetings
- Individual counties
- 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



Address Point Type by County

June 18, 2015



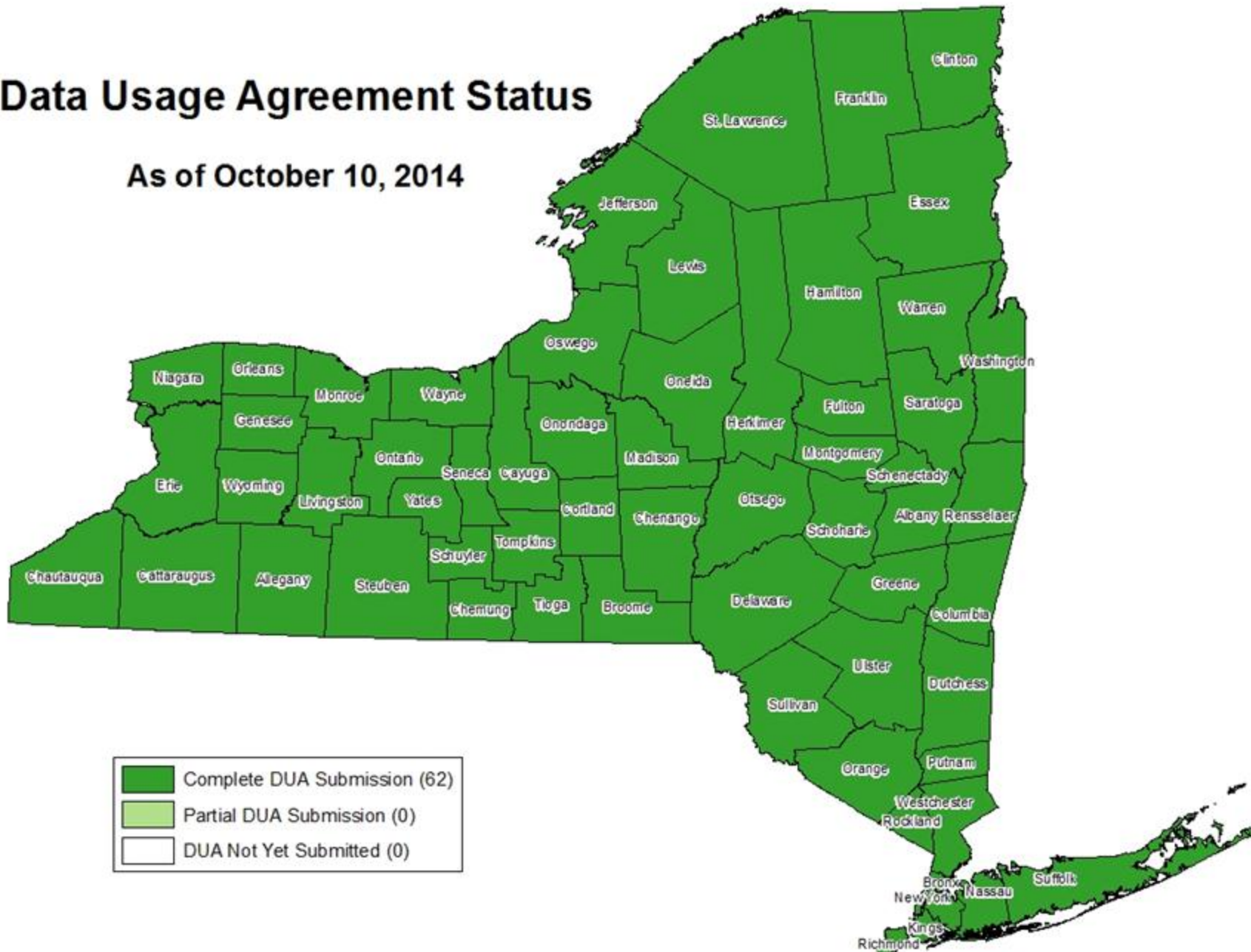
Address Point Type

- Primary Entry Point of Building (4)
- Rooftop (21)
- Driveway Street Entrance (7)
- Parcel Centroid (8)
- None (22)

* 2 to 3 towns have Address Points moved to building rooftop.

Data Usage Agreement Status

As of October 10, 2014

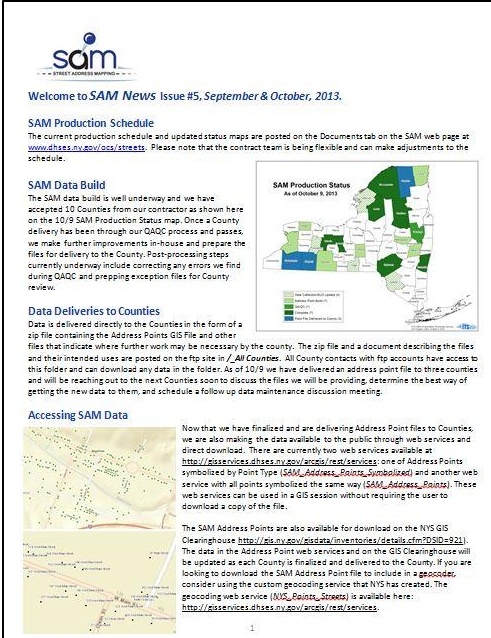


Delivery Acceptance

- 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 inspection only allows 18 errors
- Acceptance/rejection required within 10 days of delivery
- **Approximately 1 county delivered every 5-7 days**

Communicate! Learn! Educate!

- Keep stakeholders informed
 - Bimonthly SAM Newsletter
 - Annual Association and User Group Meetings
- Participate in national address activities
 - NENA Workgroups and conferences
 - NSGIC Address & NG9-1-1 Committees
 - US Census Bureau pilots and GSS-I
- Educate stakeholders and CAD vendors
 - Bimonthly webinars
 - Regional NENA GIS training classes
 - Provide sample data



sam
— STREET ADDRESS WORKSHOP —

Welcome to **SAM News** Issue #5, September & October, 2013.

SAM Production Schedule
The current production schedule and updated status maps are posted on the Documents tab on the SAM web page at www.dhses.ny.gov/ocs/strats. Please note that the contract team is being flexible and can make adjustments to the schedule.

SAM Data Build
The SAM data build is well underway and we have accepted 10 Counties from our contractor as shown here on the 10/8 SAM Production Status map. Once a County delivery has been through our QA/QC process and passed, we make further improvements in-house and prepare the files for delivery to the County. Post-processing steps currently underway include correcting any errors we find during QA/QC and grepping exception files for County review.

Data Deliveries to Counties
Data is delivered directly to the Counties in the form of a zip file containing the Address Points GIS File and other files that indicate where further work may be necessary by the county. The zip file and a document describing the files and their intended uses are posted on the file site in *_All Counties*. All County contracts with file accounts have access to this folder and can download any data in the folder. As of 10/8 we have delivered an address point file to three counties and will be reaching out to the next Counties soon to discuss the files we will be providing, determine the best way of getting the new data to them, and schedule a follow up data maintenance discussion meeting.

Accessing SAM Data
Now that we have finalized and are delivering Address Point files to Counties, we are also making the data available to the public through web services and direct download. There are currently two web services available at <http://giservices.dhses.ny.gov/arcgis/rest/services>, one of Address Points symbolized by Point Type (*SAM_Address_Points_Quinboloid*) and another web service with all points symbolized the same way (*SAM_Address_Points*). These web services can be used in a GIS session without requiring the user to download a copy of the file.

The SAM Address Points are also available for download on the NYS GIS Clearinghouse <http://gis.ny.gov/arcdata/inventories/details.cfm?ID=322>. The data in the Address Point web services and on the GIS Clearinghouse will be updated as each County is finalized and delivered to the County. If you are looking to download the SAM Address Point file to include in a geocoder, consider using the custom geocoding service that NYS has created. The geocoding web service (*NYS_Points_Streets*) is available here: <http://giservices.dhses.ny.gov/arcgis/rest/services>.

1

Files Provided to Counties

Data in NENA CLDXF Standard

NENA CLDXF

Parsed Address Examples

Address Number Prefix

Address Number

17

112

1007

Address Number Suffix

A

½

Street Name Pre Modifier

Street Name Pre Directional

North

Street Name Pre Type

Avenue

Street Name Pre Type Separator

of the

Street Name

Union

Americas

Lee

Street Name Post Type

Street

Highway

Street Name Post Directional

Street Name Post Modifier

Access Road

Subaddress Elements

NENA CLDXF

Building

Floor

Unit

Room

Seat

*Additional Location
Information*

Parsed Subaddress Examples

Building 7A

Tower B

Floor 4

Mezzanine

Penthouse

Room 10N

Cubicle 24

Loading Dock

FGDC

Subaddress Type: Building, Wing, Floor, Room, Apartment, Suite

Subaddress Identifier: 4, Zero, 2D, Mezzanine, Penthouse, Basement

Address Points Deliverable

(symbolized by Point Type)



Address Points Deliverable (symbolized by Point Type)



6.2 million total points delivered

5.1 million primary addresses

1.1 million subaddresses

Spatially Invalid Address Points

(addresses geocode only to street centerlines)



Spatially Invalid Address Points

(addresses geocode only to street centerlines)



Exception Report

(addresses don't geocode to parcels or centerlines)

	A	B	C	D
1	ADDRESS	SOURCE	REASON	EXCEPTION_FLAG
29	7036 Third Romulus	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
30	81 Willard Dtc Romulus	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
31	8405 Bassett Rd Covert	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
32	8453 A 7 Lower Lake Rd Lodi	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
33	8453 A-20 Lower Lake Rd Lodi	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
34	8453 A21 Lower Lake Rd Lodi	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
35	8453 D-7 Lower Lake Rd Lodi	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
36	8565 Mann Ln Lodi	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
37	8588 # 1 Farris Ln Lodi	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
38	8897 Arden Rd Covert	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
39	9224 Lamoreaux Ldg Lodi	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
40	9248 Lamoreaux Ldg Lodi	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
41	9922 County Line Camp Lodi	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
42	Foreign Exchange Trumansburg Territory	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
43	4400 Seybolt Rd Seneca Falls 13148	Business Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
44	6150 State Route 96 Romulus 14541	Business Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
45	68 Elizabeth Blackwell St Geneva 14456	NAVTEQ	Address was successfully geocoded to NYS Centerlines, but could not be accurately located	Not Found
46	10435 Hatch Rd Waterloo 13165	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
47	12135 Armitage Rd Seneca Falls 13148	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
48	146 Strang Rd Waterloo 13165	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
49	1707 Beaujon Rd Ovid 14521	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
50	20e Stanton Meadows Dr Seneca Falls 13148	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
51	21e Stanton Meadows Dr Seneca Falls 13148	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
52	2942 Knauss Rd Waterloo 13165	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
53	3395 Us Route 20 Seneca Falls 13148	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
54	3996 County Road 153 Ovid 14521	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
55	43 1/2 Center St Seneca Falls 13148	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
56	4902 Mcgrane Rd Romulus 14541	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
57	5693 Colonels Dr Romulus 14541	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG

Public Access to SAM Data

NYS GIS Clearinghouse - | x

gis.ny.gov/gisdata/inventories/details.cfm?DSID=921

GIS Data Set Details

Data Set Name	Description	Theme	Metadata
NYS Address Points <i>Revised: June 2015</i>	Point files of addressed properties in New York State. Data is not complete statewide. The Address Points–Navteq file is copyright protected. In the Address Points–SAM file, the ZipCode and ZipName attribute data is copyrighted by HERE North America LLC 2013 and licensed to the New York State Office of Information Technology Services. Please refer to the Metadata for more information.	Cadastral (tax parcels) Census Miscellaneous Reference/Index	n/a

Supporting Documentation

- Data Dictionary–Streets and Address Points (Revised 09/14)
- Geocoding – ESRI Instructions

A web service of the SAM Address Point file is available here:
<http://gisservices.dhss.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).

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. Documentation on the geocoding service can be found at:
<http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1278>.

The NYS Address Point File is changing! Please see the [SAM project](#) about future updates to the statewide address point file. Due to size limitations, there is no longer a statewide Shapefile version of the SAM Address Points. Counties that do not have data available for download are currently under development.

Address Point Type

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

Files available to the Public

Files	Download	Metadata
Address Points - SAM - Statewide	GEODATABASE Updated June 2015	Metadata
Albany County	GEODATABASE SHAPE	Metadata Metadata

Web Service

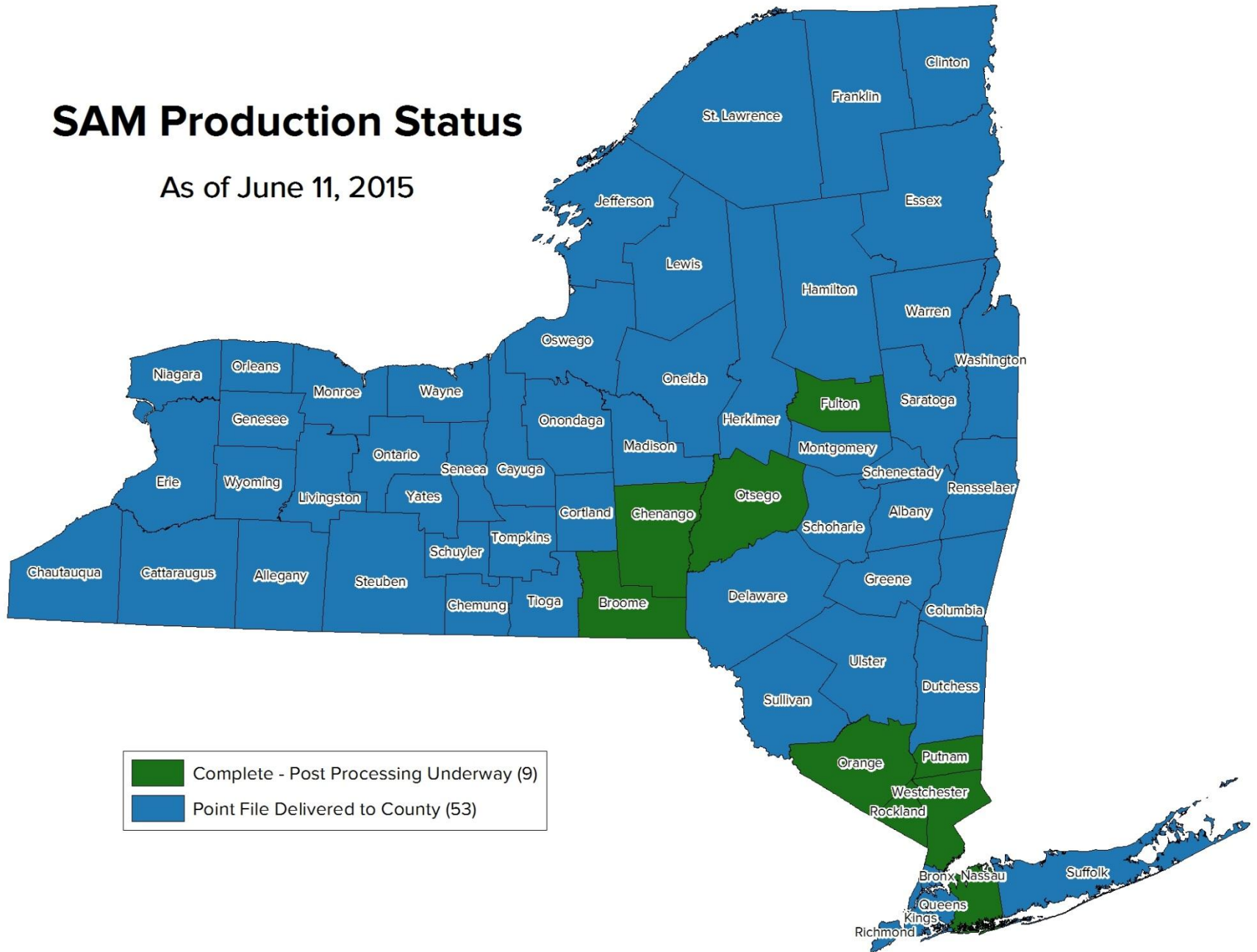
Geocoding service

Direct Download

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

SAM Production Status

As of June 11, 2015



SAM Program Objective

Maintain statewide authoritative street and address point databases to support Next Generation 9-1-1 and other stakeholder and customer activities

SAM Program

- SAM Project transitioned to SAM Program
- State funding committed for permanent program
- Temporary staff extended 2 years
 - Finished post processing SAM Address Points
 - NYS Streets edits - based on Address Points
 - NYS Streets edits - based on DOT's ARNOLD Project
- Deploy and support GeoLynx
 - Web based data maintenance tool
- Strategize maintenance with stakeholders

SAM Address Points

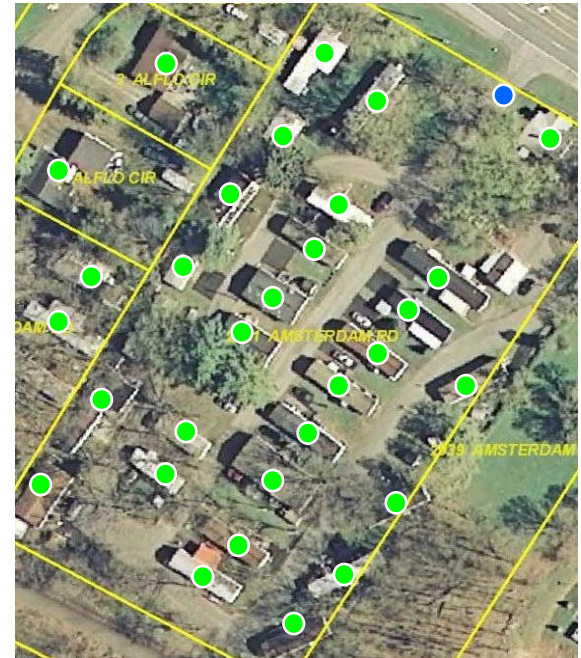
Stage 2: Maintenance

Counties use NENA standards to:

- **Locate** addresses in Spatially Invalid file and Exception Report
- **Add new** points
- **Refine** locations
- Map **subaddresses**

New York State:

- Facilitates data maintenance discussions
- Provides data maintenance tools
- Provides data hosting/distribution services



Stage 2
Refine Locations
Map Subaddresses

March 27: GeoLynx data maintenance go live

7 counties already trained

410 address point edits made by counties

51,969 address point edits made by GPO

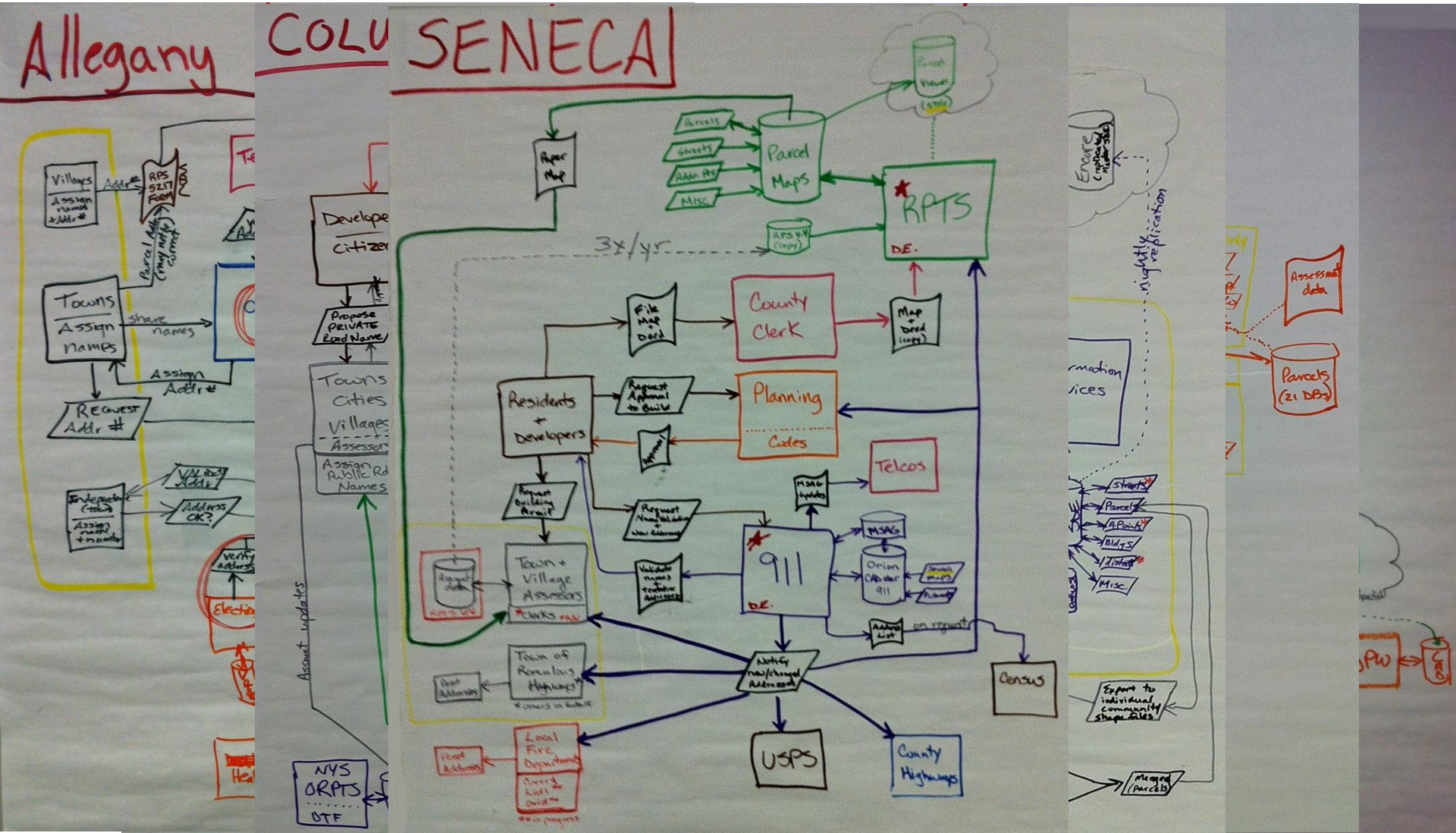
12,610 street edits made by GPO

603 S Pearl St

Onsite Data Maintenance Discussions

- Overview of data build & QA
- Address data flow discussion
 - Identify key people
 - Leverage existing processes
- Strategize data maintenance
 - Are they interested in the NYS-provided tool?
 - If editing locally, set edit rules & update frequency
- Detailed review of delivered data

Map address data flow in the County



Data Maintenance Tool Challenges

The screenshot shows the GeoLynx Server web application. The browser address bar displays <https://sam.its.ny.gov/glserver/>. The application interface includes a search bar with the placeholder text "Street Address or Longitude", a toolbar with navigation and editing tools, and a sidebar with "Web DMS" and "Web DMS Editing" sections. The main map area shows an aerial view of a residential area in Lewiston, NY, with street names like Mohawk St, Kathleen Ct, and West Lane. A green line is drawn on the map, and several points are marked with colored dots. The Esri logo is visible in the bottom right corner of the map area.

State hosted

NYS user identity/access management

Largest data set ever loaded

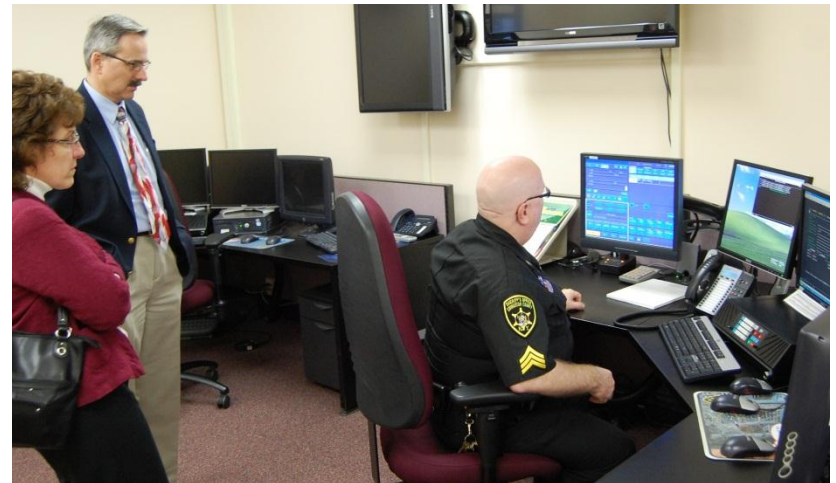
Old technology

Involved in National Address Activities

- NENA Standards Development
 - Development of Site/Structure Address Point Data for 9-1-1
 - NG9-1-1 GIS Data Model
- Address standards discussions with 9-1-1 CAD vendors
- Participation in the US DOT/Census National Address Database Summit
- Zip Code Validation and Address Standardization discussions with the USPS
- NYS DOT Local Highway Inventory Modernization (ARNOLD)

Key Take-Aways

- Listen to learn stakeholders needs and concerns
- Communicate, communicate, communicate
- Stay abreast of national standards
- Develop base data and improve over time
- Understand vendor solution limitations
- Share what you know
- Keep communicating!!



Questions??

Thank you!

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