

STATEWIDE GIS DATA NC PARCELS PROJECT

NC Integrated Cadastral Data Exchange

Funded by US EPA Grant 83431001

Prepared for NC Geographic Information
Coordinating Council

August 13, 2014

Today's Topics

- Background
- Grant Project Completion
- Plan for Expanding and Sustaining
- Discussion
- More Information

Background

- Council vision
- Goal – seamless parcels
- Statewide Mapping Advisory Committee
 - Working Group for Seamless Parcels
 - US EPA Exchange Network Grant 2009
- Project Team 2013-14

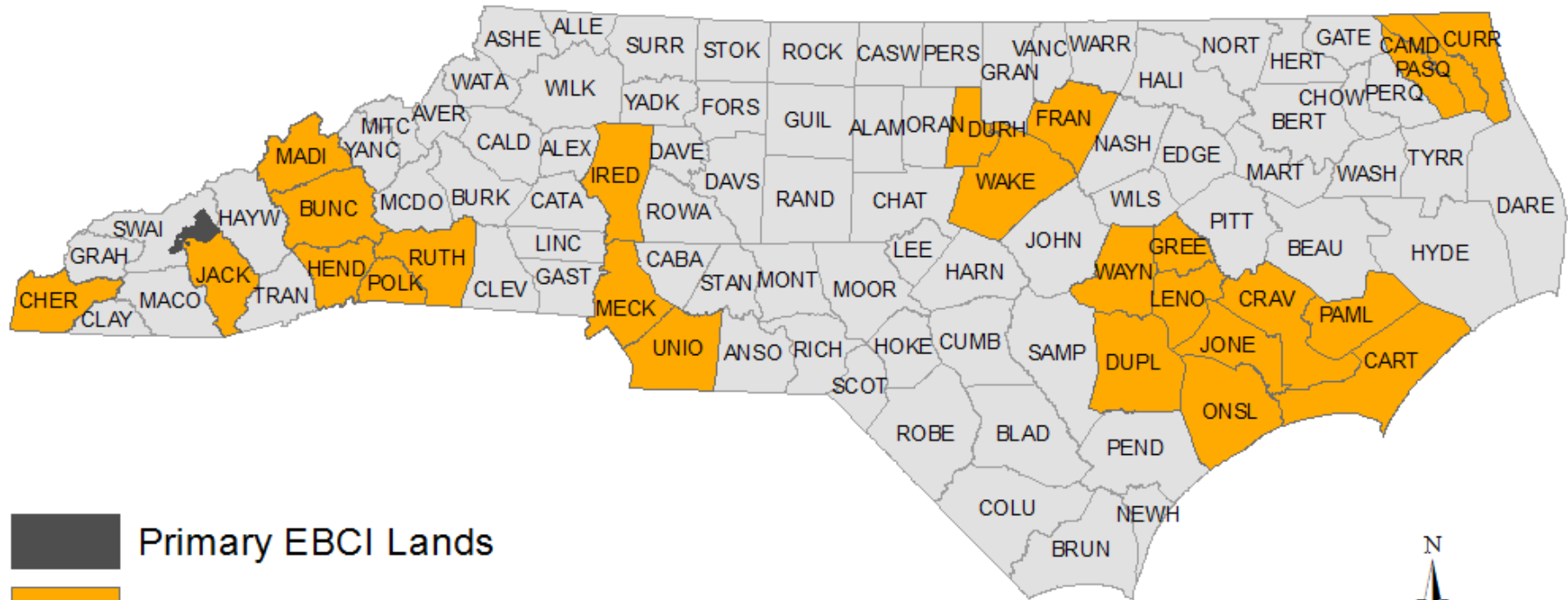
Goal



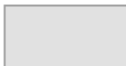
- Statewide, standardized parcel data
- Business need – enterprise data / business processes
- Business case – efficiency / do more / save
 - Economic development, emergency management, transportation planning...

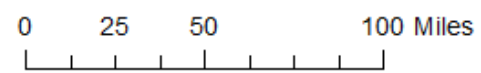
Solution - Achieved

- Integrated authoritative county parcel data
- Standardized / translated
- Created online tool
- Serving data for public discovery and access
 - NC OneMap
- Publishing in open data formats
- Results for 25 counties

North Carolina and Eastern Band of Cherokee Indians Integrated Cadastral Data Exchange Project Participants



-  Primary EBCI Lands
-  First set of counties (25)
-  Other counties



Sources: NC Center for Geographic Information and Analysis and the Working Group for Seamless Parcels, Statewide Mapping Advisory Committee.

January 2014



Team Work

Players

- **Carbon Project, Inc.**
- **Fairview Industries, Inc.**
- **Atlas Geographic Data, Inc.**
- CGIA /ITS
- Dept. of Secretary of State
- Department of Transportation
- NCEM, DENR, DOR...
- Tribal and local partners
- **GICC and committees**
- Enterprise PM / ITS

Expertise

- > **Application development**
- > **Parcel data / standards**
- > **Parcel data analysis / management**
- > Project management / partners
- > Parcel data / standards
- > Parcel integration
- > Parcel data applications
- > Data development and management
- > **Technical advice and oversight**
- > Project management advice, oversight, technical advice





- Awareness of data needs.

- Just a couple of attributes make a difference.

- Improving the availability of data for a wider range of users.

Solving The Parcel Puzzle

Why does the Transformation Tool work for Local Government?

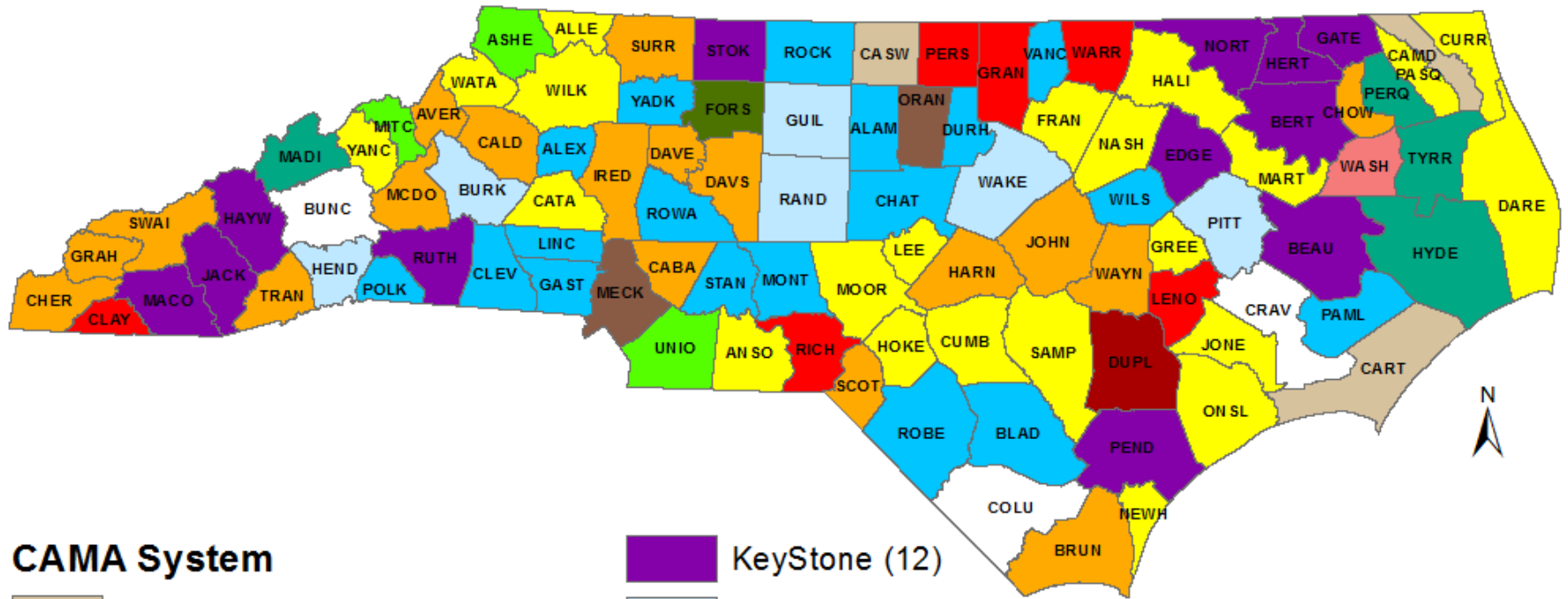
Easy to Use

Data Updates

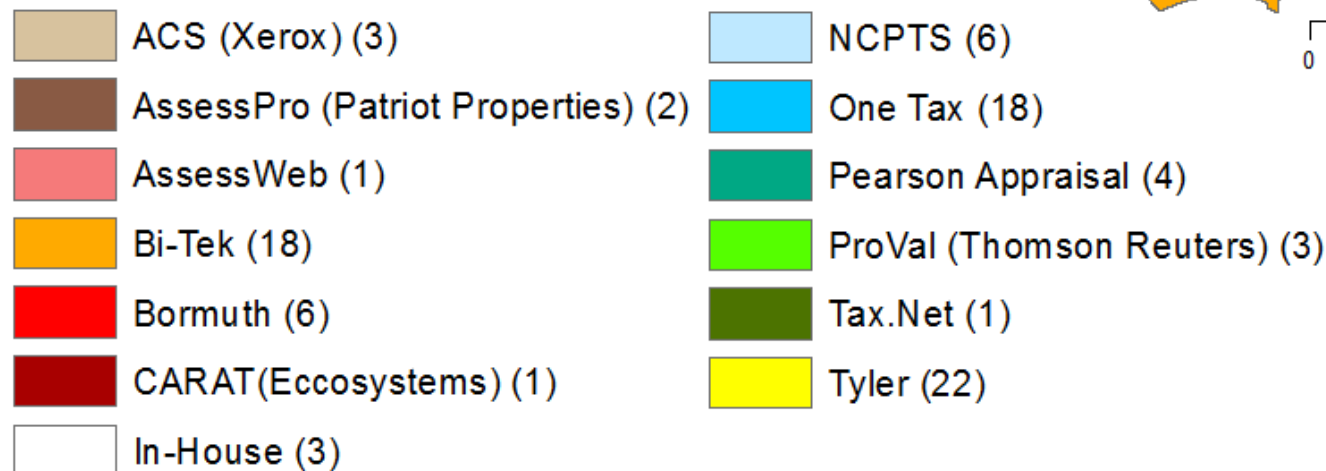
Metadata

Error Reports

Computer Assisted Mass Appraisal Systems by County, 2014



CAMA System



Source: North Carolina Department of Revenue, 2014

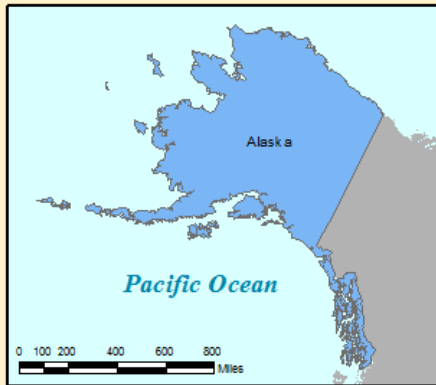
August 7, 2014



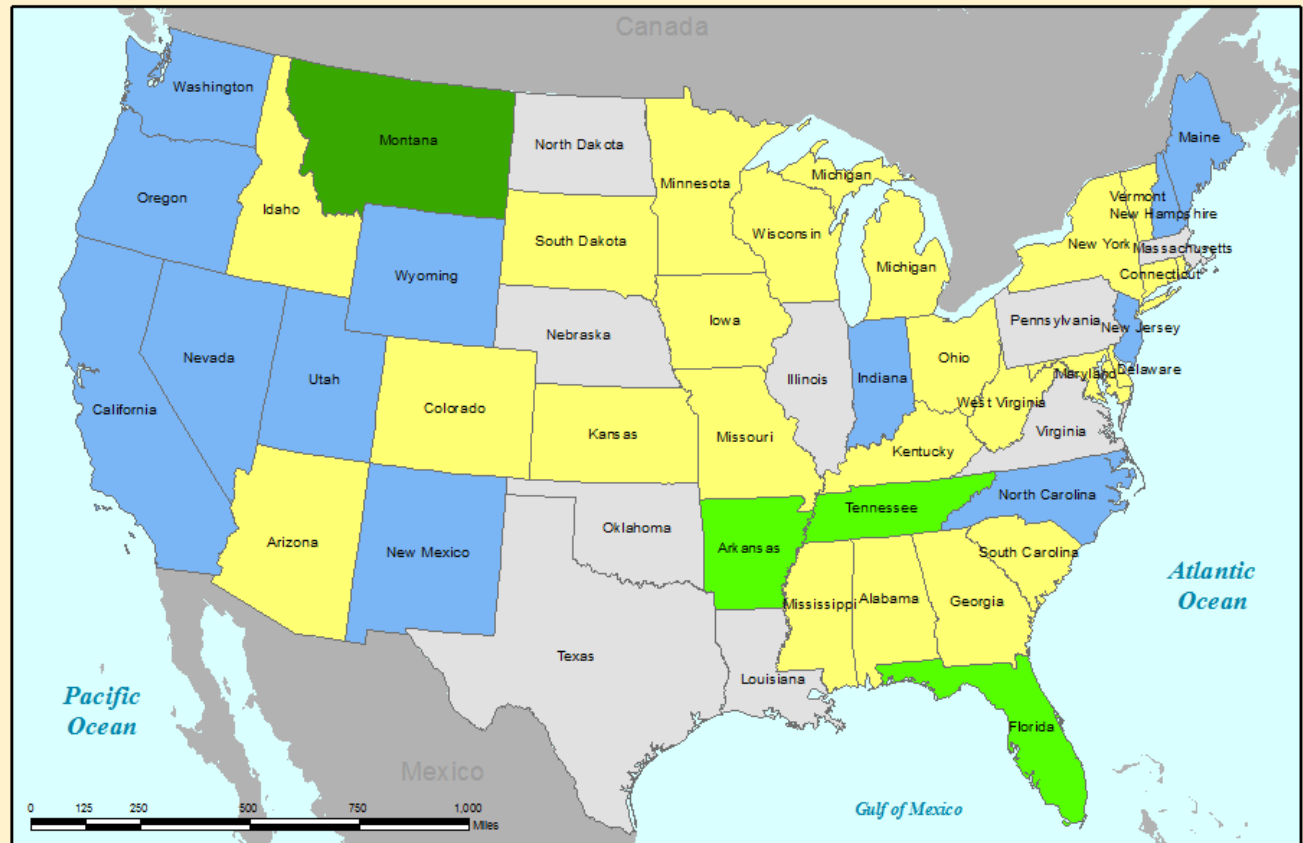
Status

- Standard fields and public access achieved
- 25 percent of state is not enough to realize full benefits
- 90 percent or more required
- NC will have a competitive advantage in the region

Alaska



Hawaii



Parcel Status

- Reconciled
- Local Standardized
- State Standardized
- Not Standardized
- Not Defined

Status of Parcel Stewardship in the United States

Coordinate System: Albers
 Central Meridian: 96°0'0"W
 1st Std Parallel: 20°0'0"N
 2nd Std Parallel: 60°0'0"N
 Latitude of Origin: 40°0'0"N

Where Next?



Statewide Resource Within Reach

- ✓ Standard schema
 - ✓ Working online tool
 - ✓ Public access to products
 - ✓ Contract w/ O&M option
 - ✓ Agency to coordinate
 - ✓ Collaborators
 - ✓ Governance
 - ✓ Plan
-
- **Data content / producers**
 - **Funding commitments to expand and sustain**

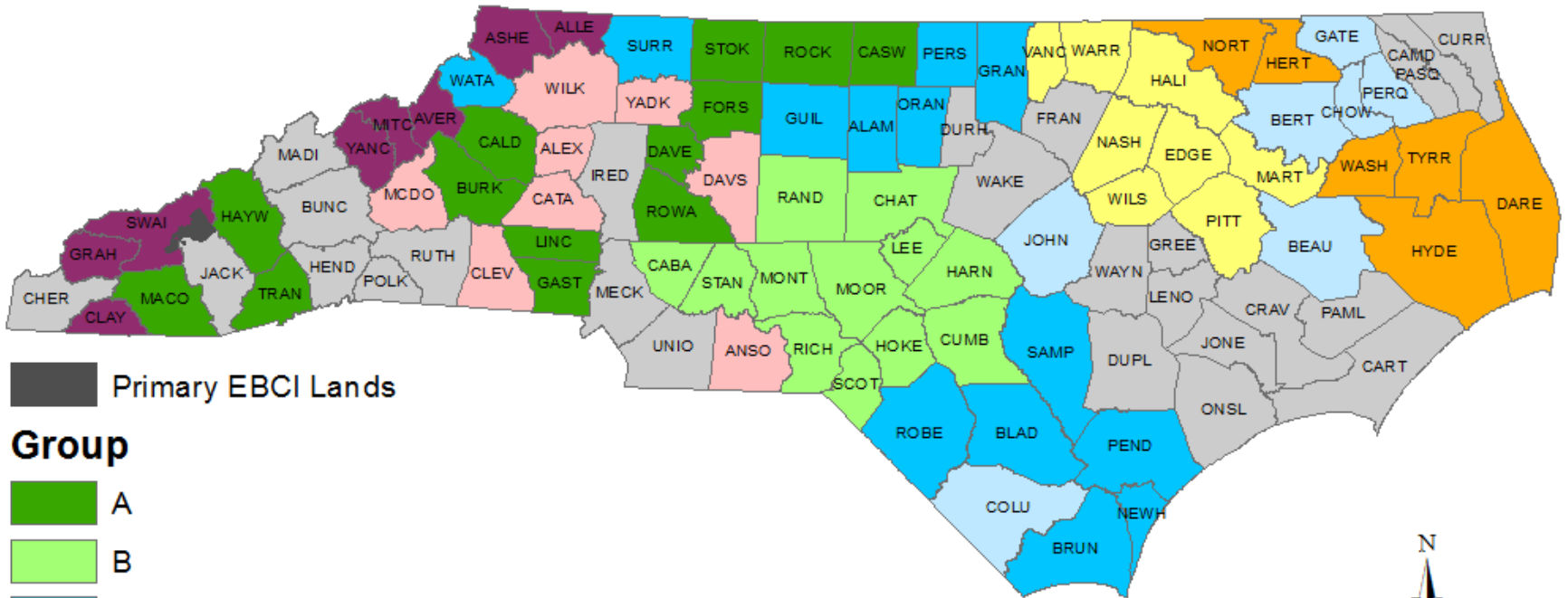
Roles

- Council
 - Statewide Mapping Advisory Committee
 - Working Group for Seamless Parcels
- CGIA
- Secretary of State, Land Records Management
- Revenue
- Transportation
- Eastern Band of Cherokee Indians
- Agriculture & Consumer Services
- Public Safety
- Other state agencies
- County data managers

Plan for Expanding and Sustaining

- Operate and maintain tool and data
- Reach out to data producers
- Add 75 more counties
- Assist with transformations
- Expand content monthly
- Release new content monthly
- Realize benefits

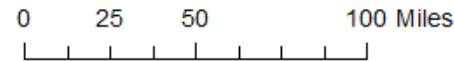
North Carolina and Eastern Band of Cherokee Indians Integrated Cadastral Data Exchange Project Plan



Primary EBCI Lands

Group

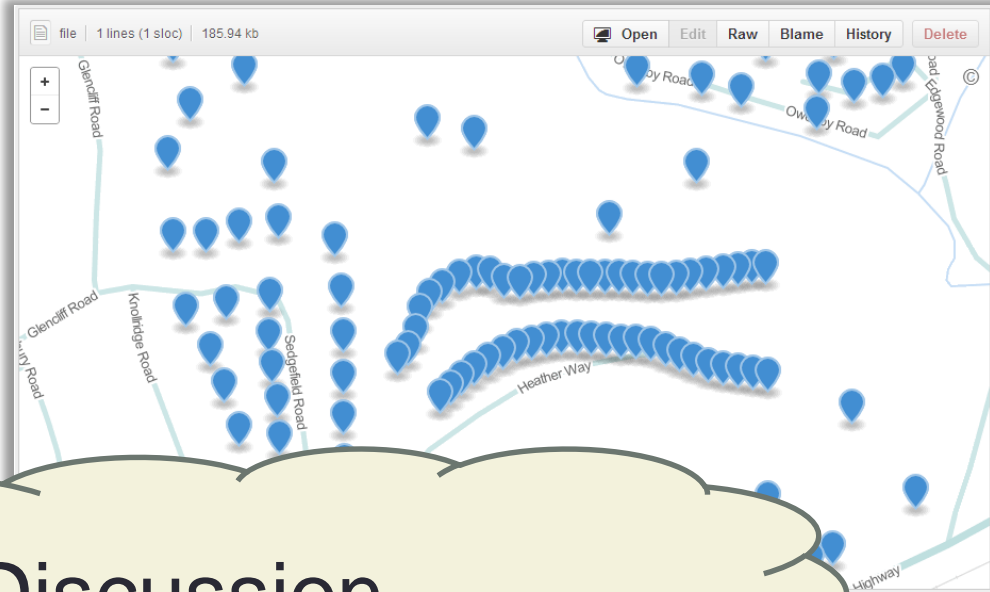
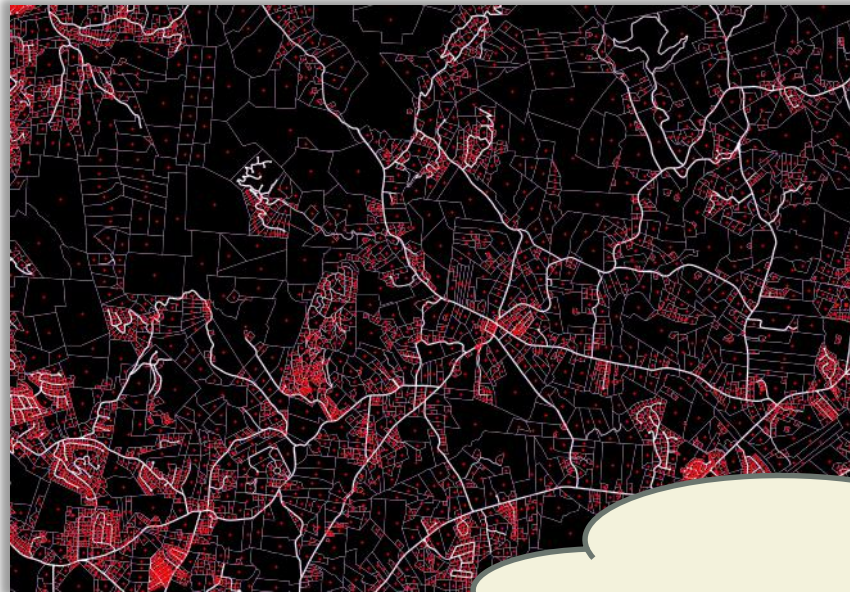
- A
- B
- C
- D
- E
- F
- G
- H
- Pilot



Sources: NC Center for Geographic Information and Analysis
and the Working Group for Seamless Parcels,
Statewide Mapping Advisory Committee.

July 2014





Discussion

Carbon Transformer Logout

Active Group: **NC Parcels** Module: **Field Transforms**

Select County: Henderson Select Target: OWNTYPE

Transforms

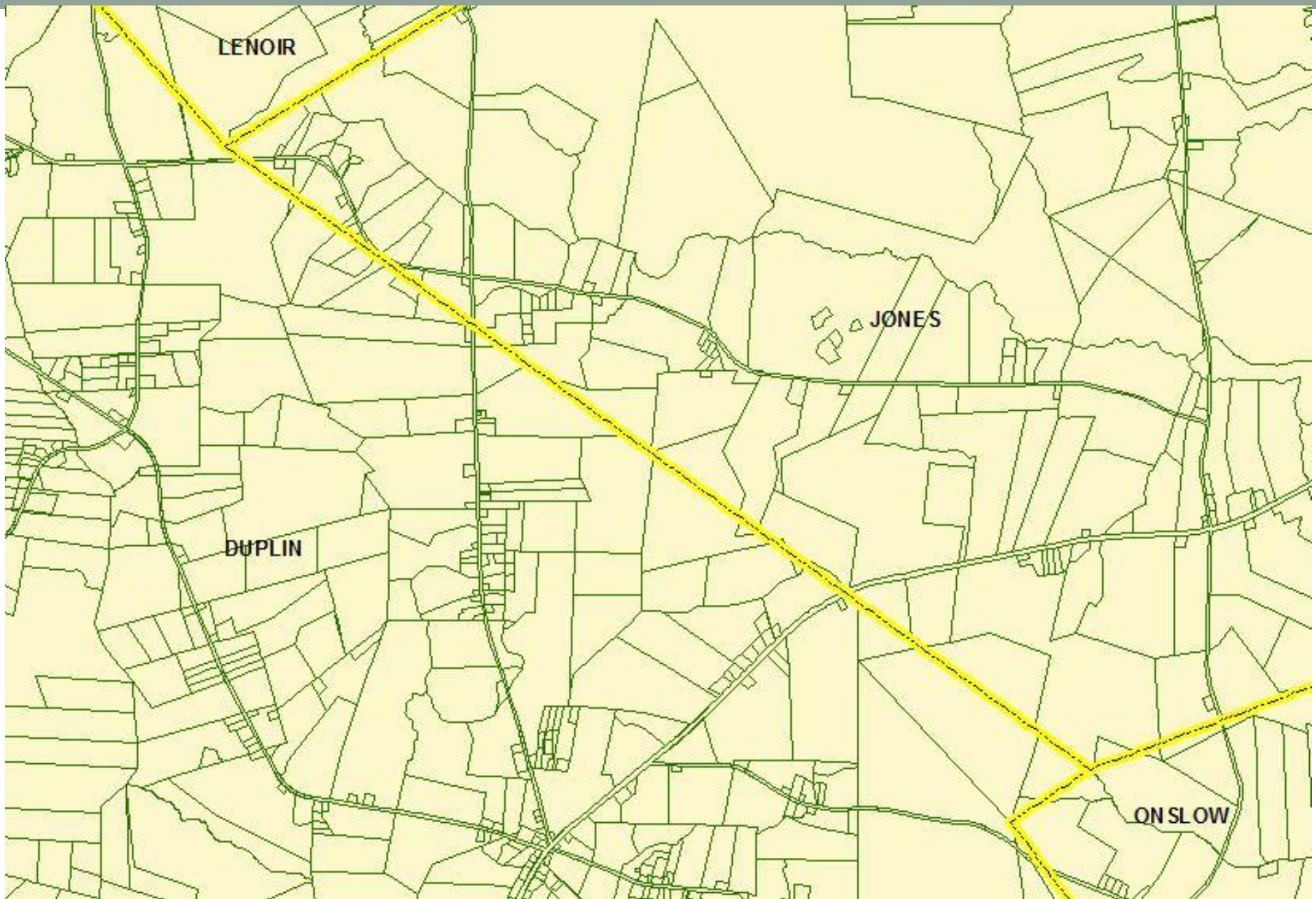
- CNTYNAME
- CNTYFIPS
- STCNTYFIPS
- GNISID
- SOURCEAGENT
- PARNO
- NPARNO
- ALTPARNO
- PARUSEDESC
- STRUCT
- IMPROVAL
- LANDVAL
- PARVAL
- OWNTYPE**
- OWNNAME

Workflow Diagram:

```
graph LR; A["IfThen  
TOTAL_PROP > '0'"] -- True --> B["Static  
\"Taxable\""]; A -- False --> C["Static  
\"Non-Taxable\""]; B --> D["+"]; C --> E["+"];
```

More Information



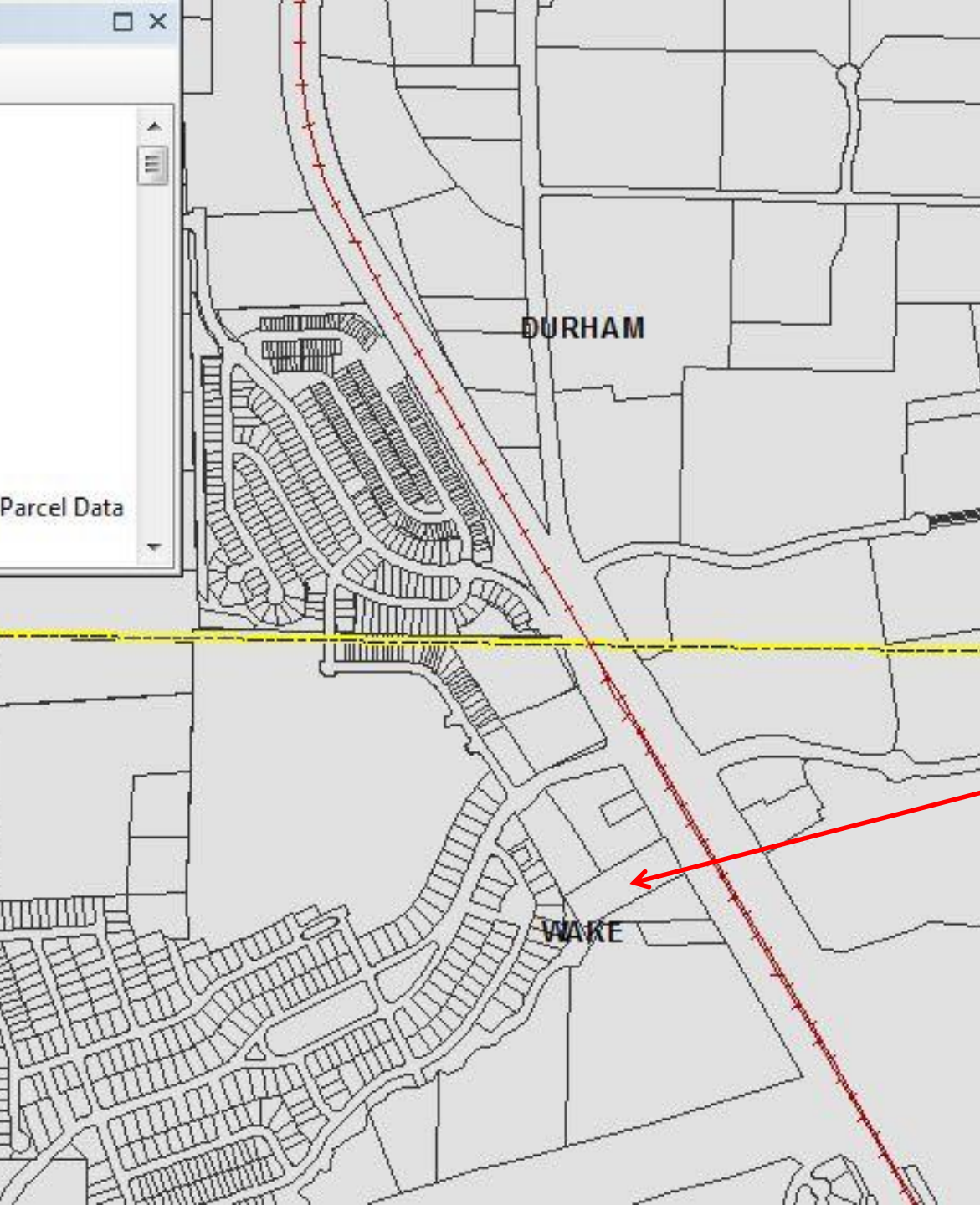


LENOIR

JONES

DUPLIN

ONSLOW



Identify

Identify from: Parcels

Parcels
 NC

Location: 623,227.602 234,548.896 Meters

Field	Value
STCNTYFIPS	37183
GNISID	1008592
SOURCEAGENC	Wake County Assessor
PARNO	0746495443
NPARNO	37183_0746495443
ALTPARNO	0062863
PARUSECODE	01
PARUSEDESC	Single Family
PARUSEDSC2	RESIDENCE-< 10 ACRES-HOME
PARUSECD2	R
STRUCT	Y
MULTISTRUCT	N
STRUCTNO	1
STRUCTYEAR	1971
PARVALTYPE	Assessed Value
IMPROVAL	44787
LANDVAL	375000
PARVAL	419787
OWNTYPE	Taxable

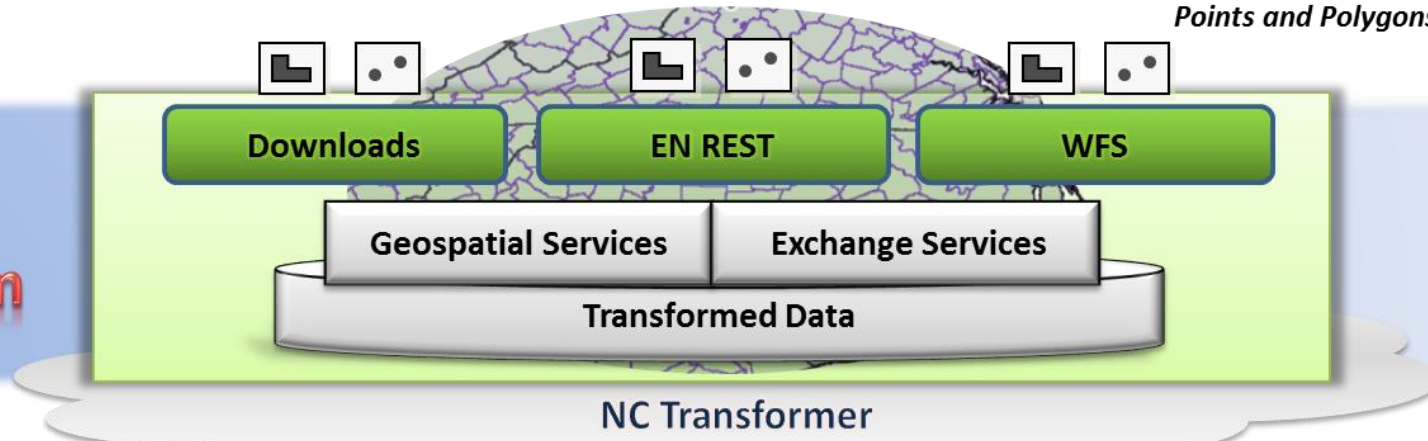
Identified 1 feature

Data Consumers

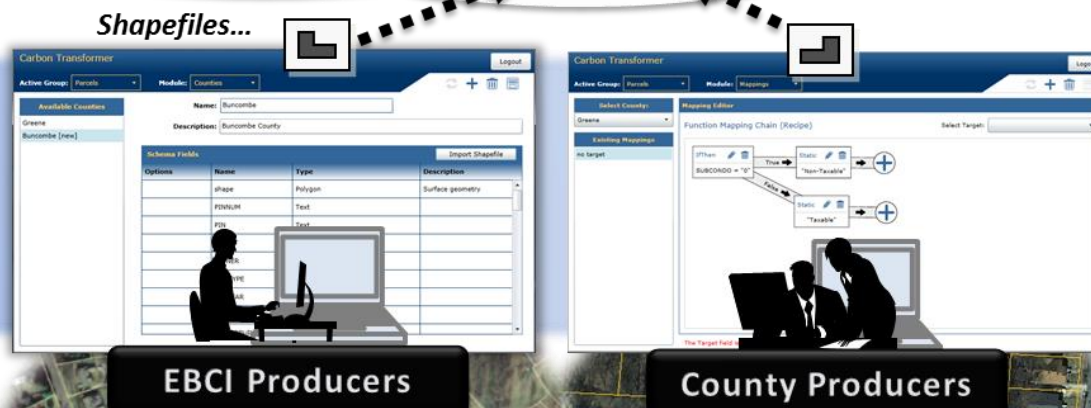


Points and Polygons...

Data Platform



Data Producers



Online capability for counties/EBCI to upload data, translate to standard, create 'points', feed NC OneMap and EPA Exchange Network...

Cloud-based Transformer

NC Parcels Transformer

Jeffrey Brown Logout

Active Group: NC Parcels Module: Home

North Carolina Integrated Geospatial Data Exchange

Creating a statewide parcel dataset is achievable through the 'Transformer', developed by the Carbon Project, Inc. for North Carolina. This tool is designed to take local parcel data and integrate it into a standardized dataset of parcels that everyone can use for publication of shapefiles and web services.

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Quick links		Documentation
Update data	Upload a new parcel shapefile to the system using existing field matching definitions (transforms).	<ul style="list-style-type: none"> • NCID/Registration Guide • Transformer User Guide • WFS REST Query Guide
Test transforms	Test the transforms of your data, verify your data, and make sure your transforms are correct.	
Update transforms	If there are errors in your test data or you have changed your dataset, use this option to review and update the field matching (transforms) for your data.	

Delivered - 1

- Master schema
- Geospatial database
- Online Parcel Transformer
- Standardized data
 - 25 counties
 - Eastern Band of Cherokee Indians

Delivered - 2

- EPA Exchange Network REST services
- NC OneMap REST services / downloadable data
- NCID authentication
- User guides
- Final Report

http://www.ncgicc.org/Portals/3/documents/FinalReport_EPA_Parcels_Project2014.pdf

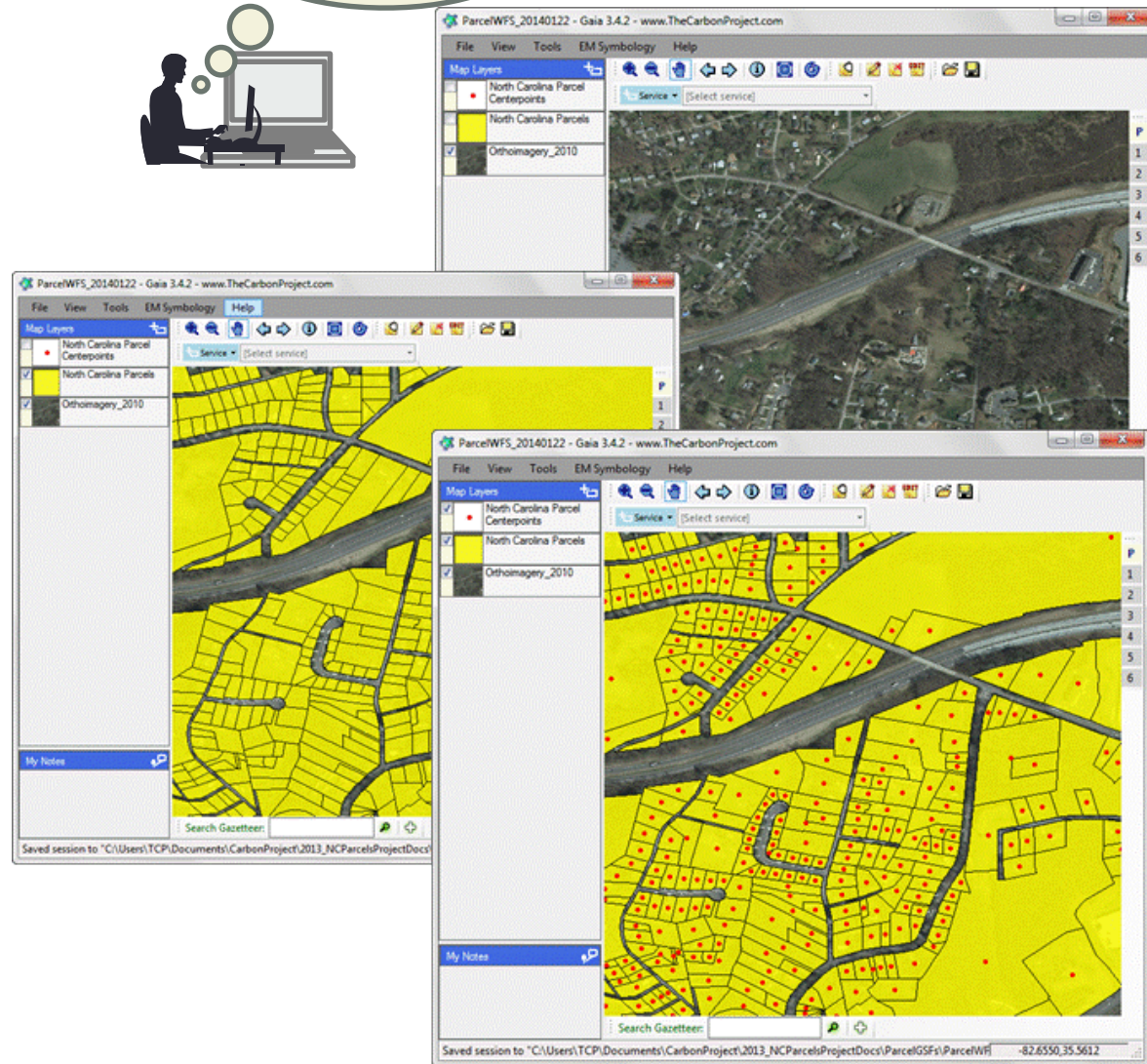
Master Schema

- **OWNNAME** - Owner name
- **MAILADD** - Full mailing address
- **SITEADD** - Full site address
- **IMPROVAL** - Value of improvements
- **LANDVAL** - Value of land
- **PARVAL** - Total value
- **STRUCT** – Structure on property
- **PARUSEDESC**- Primary parcel use description
- **GISACRE** - Parcel calculated land area

Services

- Key service interface is Web Feature Service (WFS)

Imagery and parcel boundaries and points from the Parcel WFS...



Search

Records shown from: NC OneMap GeoSpatial Portal
 Click here to select different site(s) or configure search.

More Search Options

Clear

WHERE

- Anywhere
- Intersecting
- Fully within



Results 1-3 of 3 record(s)

- Expand results
- [Zoom To Results](#)
- [Zoom To Searched Area](#)

NC Parcel Boundaries and Standard Fields - Download

This digital geospatial dataset represents parcel boundaries with standard core attributes for a collection of parcel data from North Carolina county data producers and the Eastern Band of Cherokee Indians. The Integrated Cadastral Data Exchange project ...

[Download/Open](#) [Details](#) [Metadata XML](#) [Zoom To](#)

NC Parcel Boundaries and Standard Fields - ArcGIS Feature Service

This digital geospatial dataset represents parcel boundaries with standard core attributes for a collection of parcel data from North Carolina county data producers and the Eastern Band of Cherokee Indians. The Integrated Cadastral Data Exchange project t...

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[Metadata XML](#) [Zoom To](#)

NC Parcel Boundaries and Standard Fields - ArcGIS Map Service

This digital geospatial dataset represents parcel boundaries with standard core attributes for a collection of parcel data from North Carolina county data producers and the Eastern Band of Cherokee Indians. The Integrated Cadastral Data Exchange project ...

[Download/Open](#) [Preview](#) [Globe \(.kml\)](#)
[ArcGIS Explorer \(.nmf\)](#) [ArcGIS \(.lyr\)](#) [Add To Map](#)
[Details](#) [Metadata XML](#) [Zoom To](#)

Reaching More Consumers

- Web Services from the Parcel Transformer (Carbon)
 - EPA Exchange Network (internal to Network)
 - REST
 - Open Geographic Data (external)
 - CSV
 - GML
 - JSON
 - KML
 - WFS
- Web Services from NC OneMap (ArcGIS Server)
 - Open Geographic Data (external)
 - Esri Map & Feature
 - JSON
 - KML
 - WMS
 - WFS

Display GeoJSON on GitHub

file | 1 lines (1 sloc) | 709.804 kb

Open Edit Raw Blame History Delete

Asheville

Riverside Cemetery

Montford Recreation Complex

Hillcrest Apts

Aston Park

Wind Oaks Town Homes

REST Service gives me GeoJSON...

Benefits

- Standard data fields – consistent for multi-county areas
- One source for parcel web services saves time for all
- Benefits to data consumers
 - Business uses range from environmental assessment, land development, owner notification, and many other government and commercial purposes
- Benefits to data producers
 - Much easier to create applications that solve problems
 - New customers and eyes on local data
 - Metadata is a product
 - Data retention (disaster recovery / archiving)

EPA PARCELS PROJECT

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