COLLABORATION IN GEOGRAPHIC INFORMATION

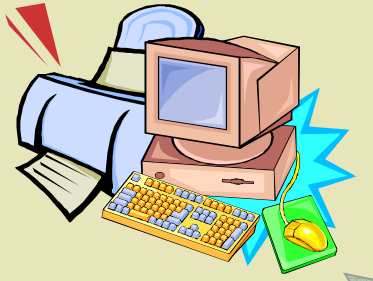
Criminal Justice Information Network
Board Meeting

November 20, 2014

Outline

1. Collaboration in Geographic Information
2. NC Parcels Project
3. Engaging Partners
4. Next Steps
5. Discussion

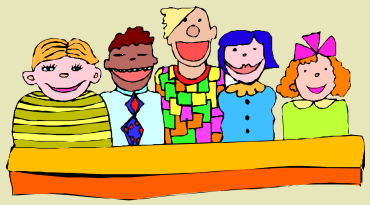
What is GIS?



Hardware

Software

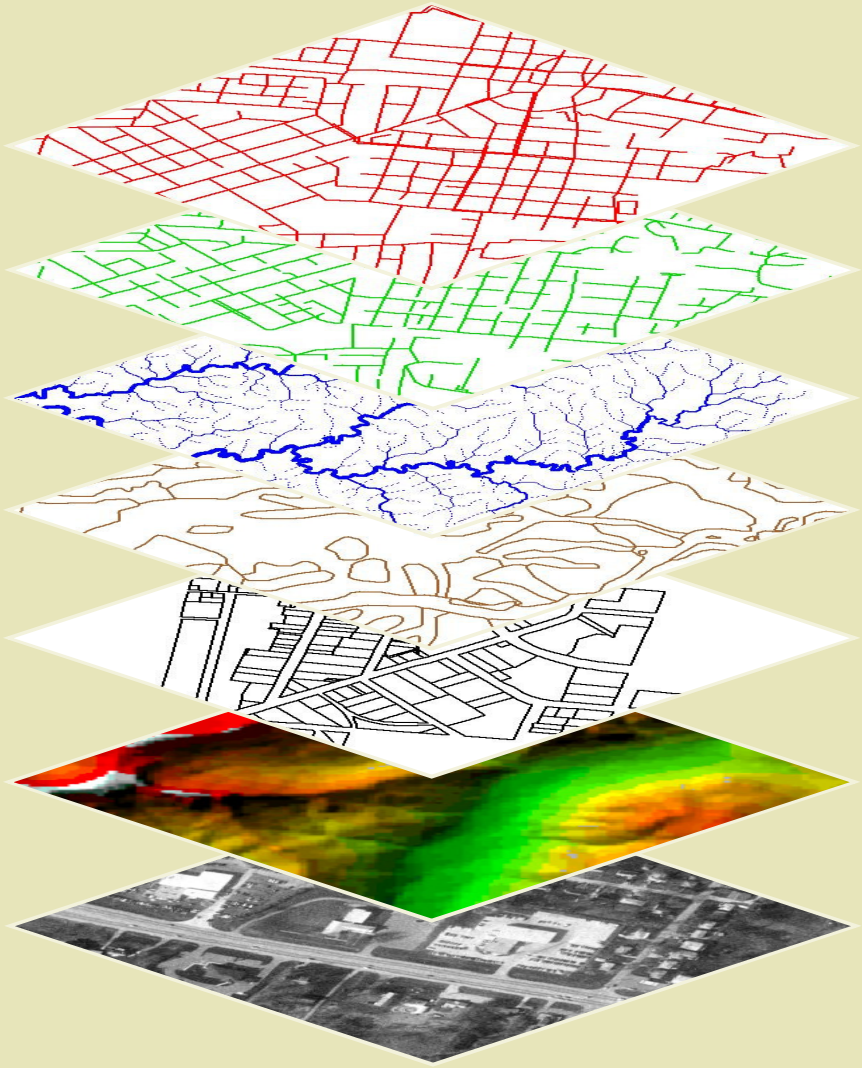
Data



People

Methods

GIS Data Are Organized As Layers



Water Lines

Sewer Lines

Surface Waters

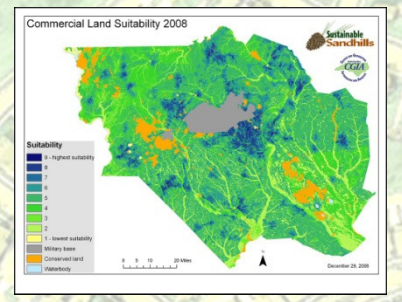
Soils

Land Ownership

Elevation

Imagery

CGIA SERVICES PROGRAM

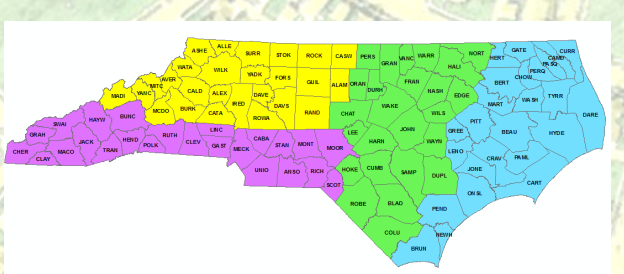


Challenges

Solutions

Informed Decisions

CGIA COORDINATION PROGRAM



nc ONE map
Geographic Data Serving
A Statewide Community

Collaborate Plan Share

Geographic Information Coordinating Council (GICC)

- Statutory, policy body created by General Assembly in 2001
- Article 76, §143-725 thru 143-727
- 33 members
- Public and private sector representation
- CGIA serves as technical staff
- CGIA leads NC OneMap implementation

NCGICC

Surveying & Engineering
Education
Military
NextGen 911
Utilities
Counties, Towns & Cities
Other Private Enterprise
Public Safety
GICC and CGIA
Commerce
State Parks & Wildlife
Transportation
Agriculture
Justice
Forest Services
Federal Agencies
Other State Agencies
Conservation
General Public

Geographic Information Coordinating Council

Committees inform strategies, plans, policies and standards

- Local Government Committee
- State Government GIS Users Committee
- Federal Interagency Committee

OITS

Center for Geographic Information and Analysis

Council members represent organizations and businesses across North Carolina

- Management & Operations Committee
- NC OneMap Governance Committee
- Statewide Mapping Advisory Committee
- GIS Technical Advisory Committee

http://www.ncgicc.org

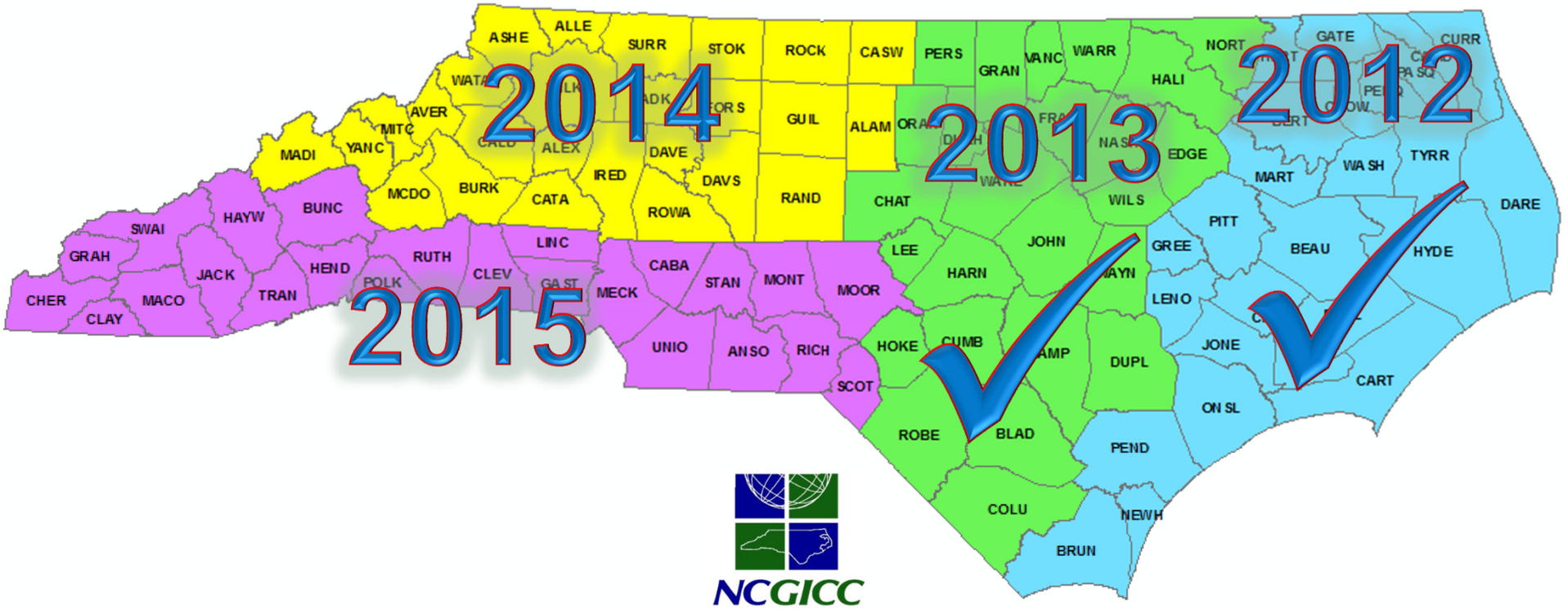
Council Priorities

- NC OneMap
- Statewide Framework Data
  - Orthoimagery
  - Addresses
  - Parcels
  - Roads
  - Streams
  - Elevation
  - Governmental boundaries
- Standards

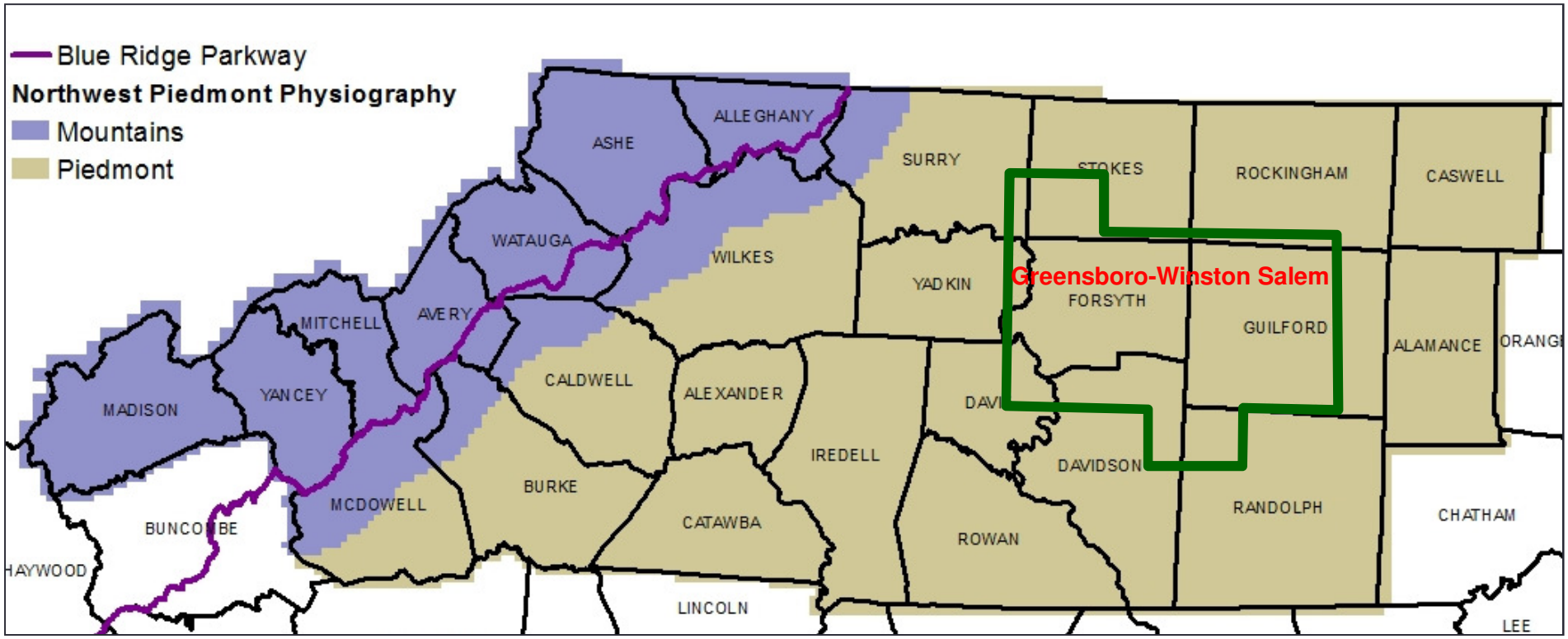
Statewide Data

- Consistent
- Complete
- Current
- Reliable
- Documented

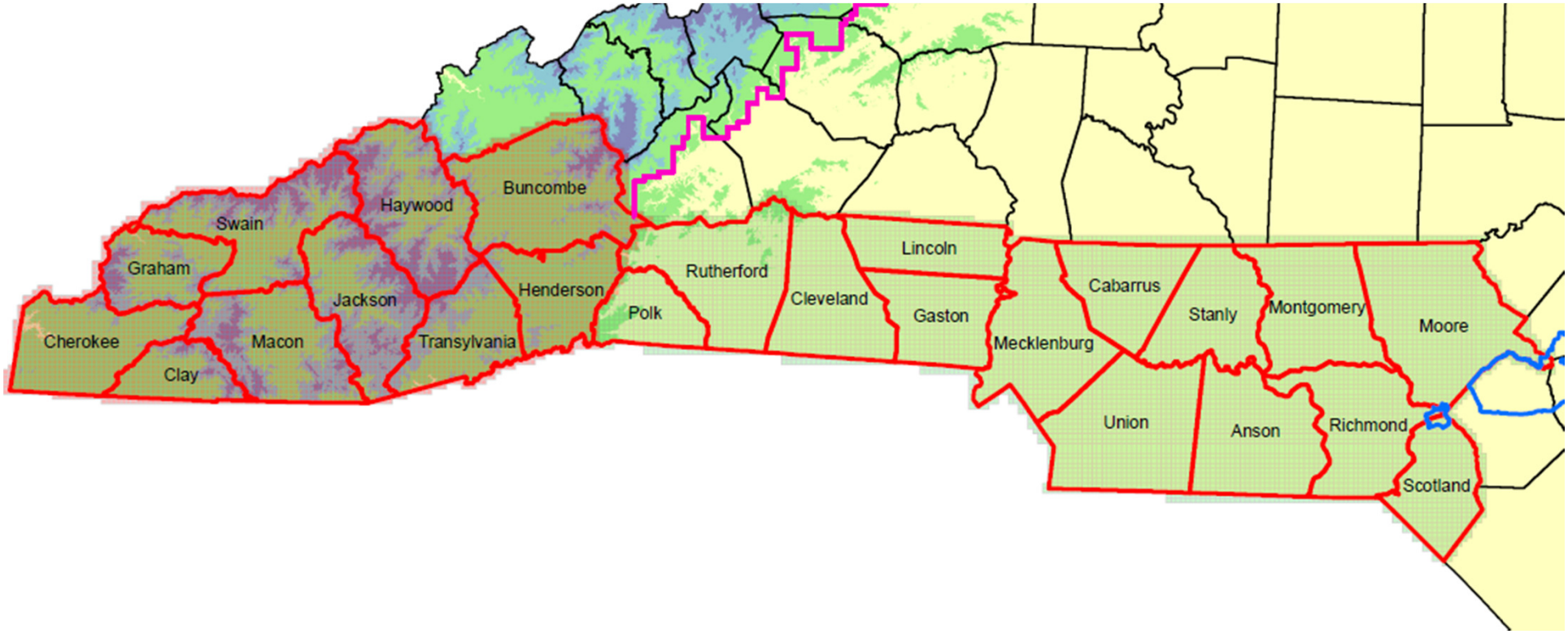
Statewide Orthoimagery Acquisition Cycle



Northern Piedmont & Mountains 2014



Southern Piedmont & Mountains 2015



NC OneMap, NC Center for Geographic Information and Analysis, NC 911 Board

NC OneMap

- First stop on the web for geospatial data
- Search and find
- Get data files
- Get web services
- Share

nc ONE map
Geographic Data Serving
A Statewide Community

Example: Parcels

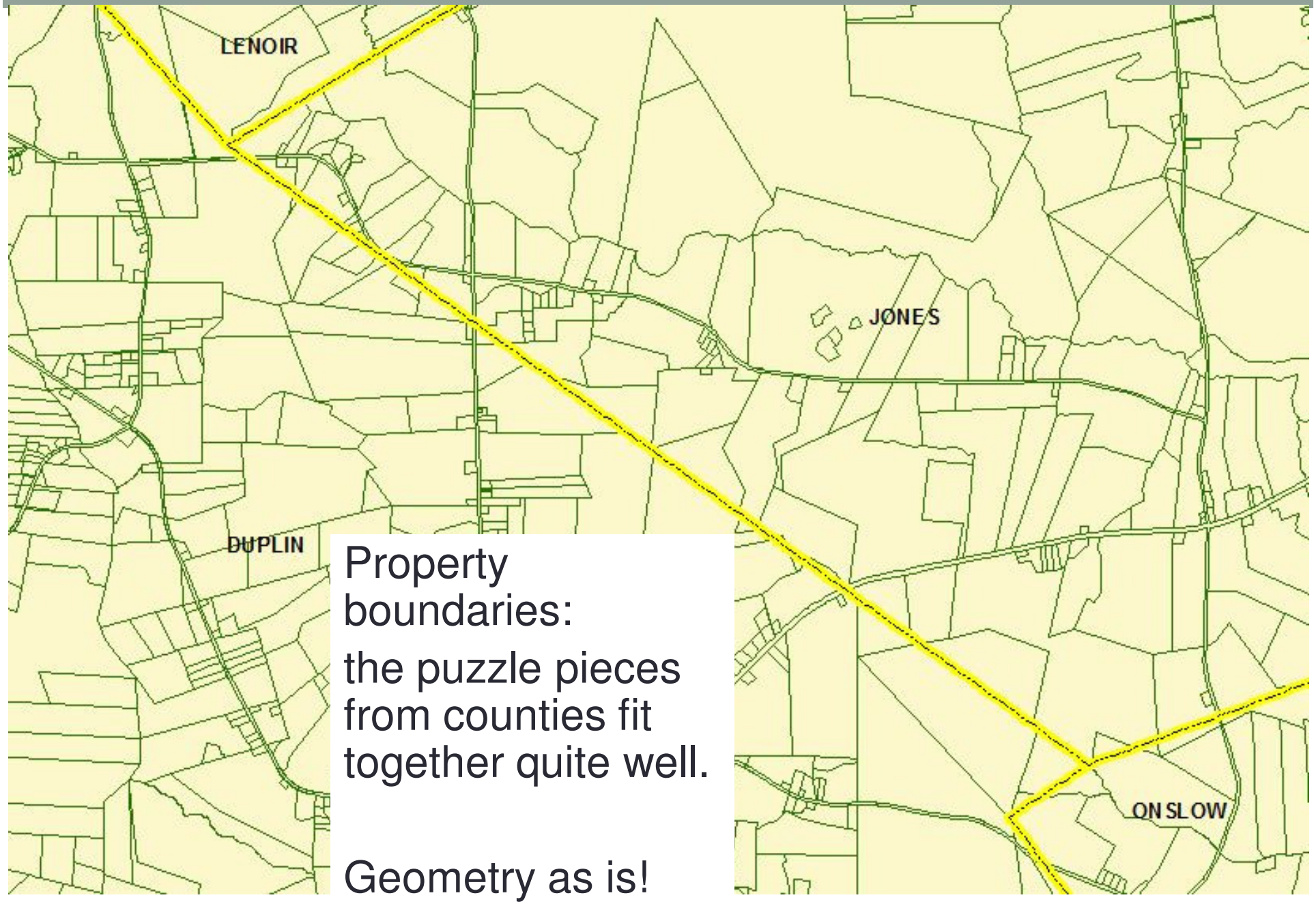
- Statewide, standardized parcel data
- Business need – enterprise data / business processes
- Business case – efficiency / do more / save
  - Economic development, emergency management, transportation planning…

Real Property in GIS: Parcels…

Why NC Parcels?

- Be prepared to inform decisions
- Have consistent data to answer completely, efficiently, and effectively
- Add value to local government investments in data
- Expand the benefits of good data

The Parcels Puzzle



Property boundaries:

the puzzle pieces from counties fit together quite well.

Geometry as is!

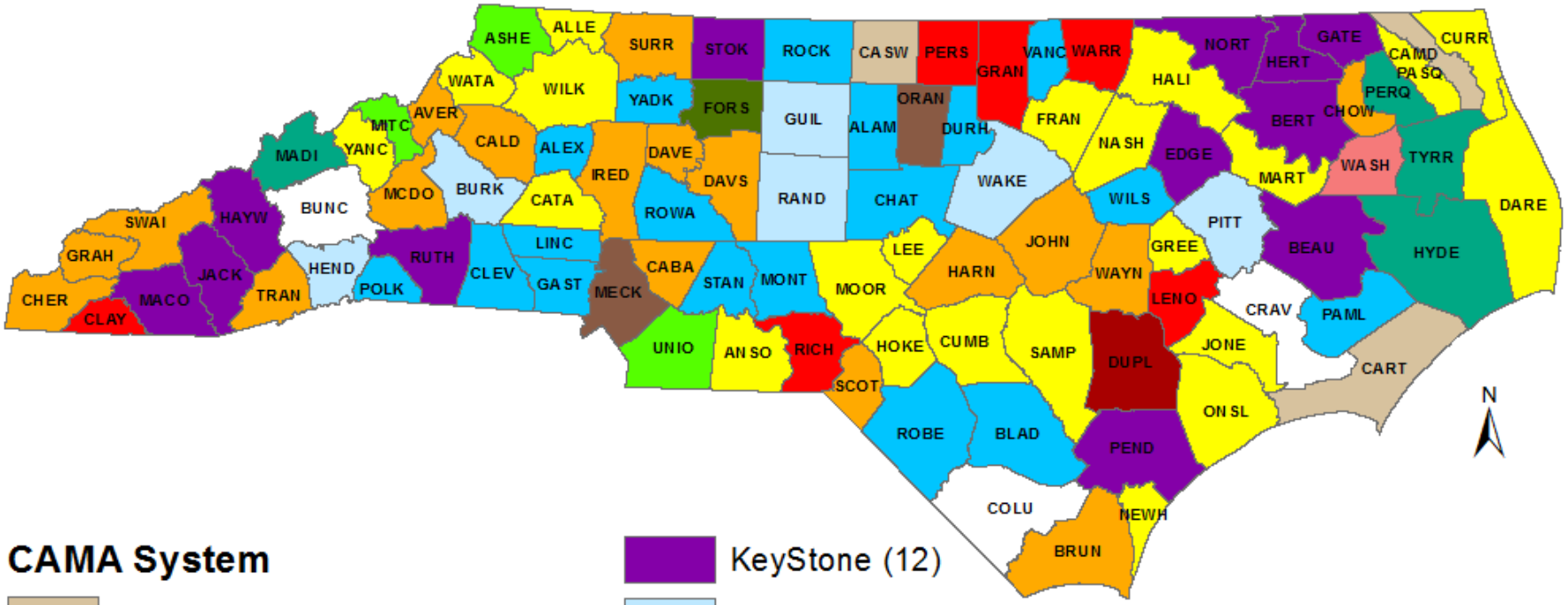
It's the Data Fields!

- GIS Query: select all parcels that are larger than 10 acres in 3 adjacent counties

- County A: CACRES DACRES
- County B: ACRES
- County C: DEEDED_ACR TOTAL_ACRE

- 3 different selections, not 1
- Research on field definitions

Computer Assisted Mass Appraisal Systems by County, 2014



CAMA System

- ACS (Xerox) (3)
- AssessPro (Patriot Properties) (2)
- AssessWeb (1)
- Bi-Tek (18)
- Bormuth (6)
- CARAT(Eccosystems) (1)
- In-House (3)
- KeyStone (12)
- NCPTS (6)
- One Tax (18)
- Pearson Appraisal (4)
- ProVal (Thomson Reuters) (3)
- Tax.Net (1)
- Tyler (22)

Source: North Carolina Department of Revenue, 2014

August 7, 2014

Center for Geographic Information and Analysis — North Carolina CGIA

Why Compile 100 Datasets?

More than one county can be involved in:

- Disaster response
- 911 call answering
- Floodplain mapping
- Transportation planning
- Economic development
- Precision agriculture
- Criminal justice
- …

Why not just download?

Published parcel data

- Visit 100 county websites?
- Available for download? Offline copy? For a fee?
- Consistency in property descriptors / tax data?
- Field definitions?
- Metadata?

Benefits

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

Be Prepared to Inform Decisions

- In a 5-county region, how many properties are at least 15 acres in area and have building value less than $2,000?
- In a 3-county area, what is the total building value of properties within 10 miles of the coast?
- Which counties have the most federal land ownership?
- What properties are at least 20 acres in area and are within 5 miles of an Interstate Highway interchange?

Solving the Parcels Puzzle

NC Parcels: Phase 1

- Grant Project
- US EPA Exchange Network
- Teamwork

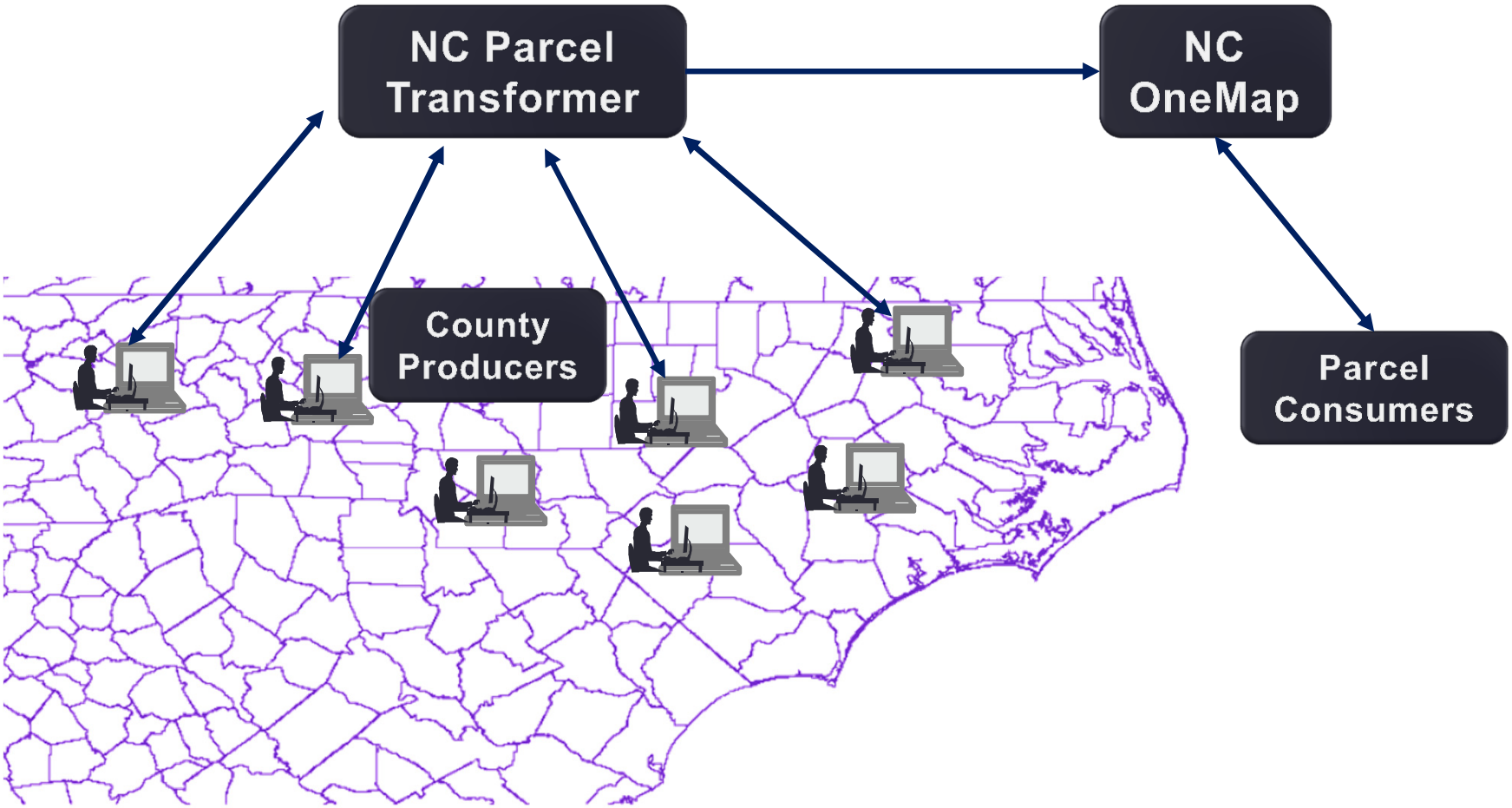
Teamwork

Players	Expertise
Carbon Project, Inc.	**Application development**
Fairview Industries, Inc.	**Parcel data / standards**
Atlas Geographic Data, Inc.	**Parcel data analysis / management**
CGIA /ITS	Project management / partners
Dept. of Secretary of State	Parcel data / standards
Department of Transportation	Parcel integration
NCEM, DENR, DOR…	Parcel data applications
Tribal and local partners	Data development and management
GICC and committees	**Technical advice and oversight**
Enterprise PM / ITS	Project management advice, oversight, technical advice

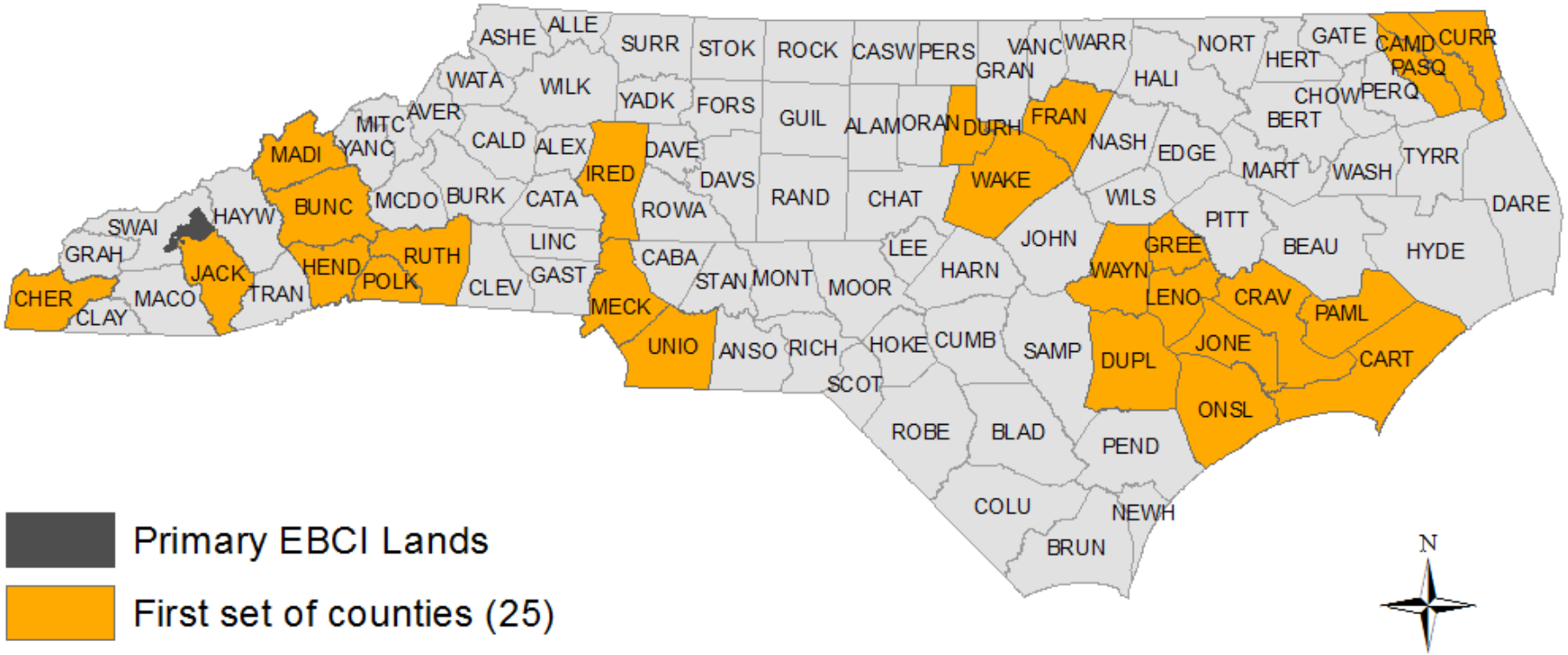
Solution - Achieved

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

Work Flow for Standardized Parcels



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



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

January 2014

NCGICC

Local Data Management

No need to change:

- Tax systems
- Data field names
- Web map viewers
- Data distribution policies

Just **share** data using the online Transformer

Online Access to Standardized Parcels

- NC OneMap

  http://data.nconemap.com

  - Get copies of standardized data
  - Use web services in GIS and applications

NC OneMap GeoSpatial Portal

HOME | SEARCH | BROWSE | DOWNLOAD IMAGERY | MAP VIEWER

Search

"NC Parcel Boundaries" 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...

Download/Open Preview Add To Map Details 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

Key Ingredients and NC Progress

- ✓Consistent
  - Standardized fields for multi-county analysis
- ✓Data fields that support a wide range of questions
  - Value
  - Structure(s) on property
  - Parcel use
- Complete
- Current
- ✓Well documented
- ✓Public access to web services and downloadable data

NC Parcels: Phase 2

Engage Producers and Expand

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

http://ncgisconference.com

Discussion

CGIA

Contacts:

tim.johnson@nc.gov

jeff.brown@nc.gov