



South Carolina Geographic Information Systems

State Outreach Regional Workshop Meetings

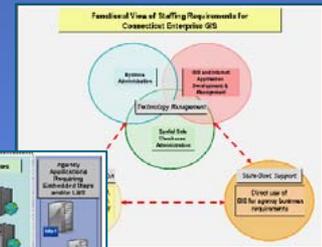
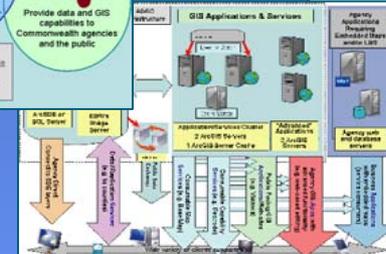
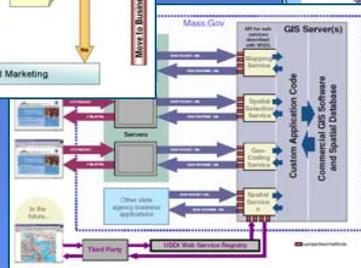
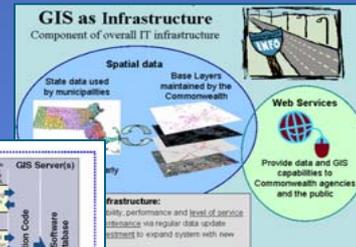
November 12-20, 2008

Florence ▪ Columbia ▪ Aiken ▪ Greenville ▪ Walterboro



Meeting Facilitator

Rich Grady
President, AppGeo



(617) 447-2455

rgrady@appgeo.com

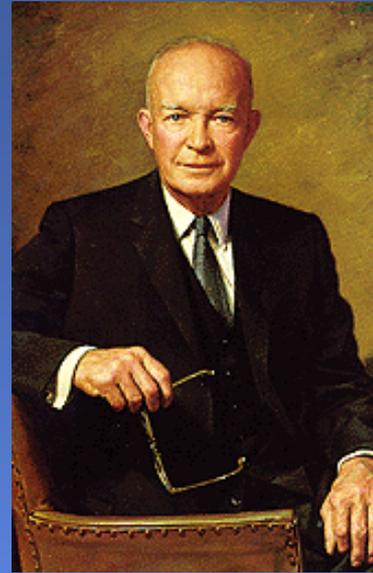
The Planning Process Matters!

**“Plans are nothing;
planning is everything”**

Dwight D. Eisenhower

**“Plans are of little importance,
but planning is essential”**

Winston Churchill



<http://www.whitehouse.gov/history/presidents/de34.html>

http://en.wikipedia.org/wiki/Image:Winston_Churchill.jpg



- **Establish enduring relationships**
- **Recognize that planning is an ongoing activity**
 - **Recalibrate plans over time**
 - **Apply lessons-learned!**

Agenda

Welcoming Remarks

PART ONE: Overview and Background

- The “National Spatial Data Infrastructure (NSDI)” and the “Fifty States Initiative” – a national context
- Description of the current “State Outreach” project
 - Regional stakeholder workshops
 - On-line survey
 - Strategic plan development
- Quick look at questions for discussion

Networking Break

PART TWO: Interactive Discussion

- Quick review of past efforts on GIS coordination in SC
- Regional perspectives on “Strengths & Weaknesses”
- Discussion of “Opportunities & Threats”

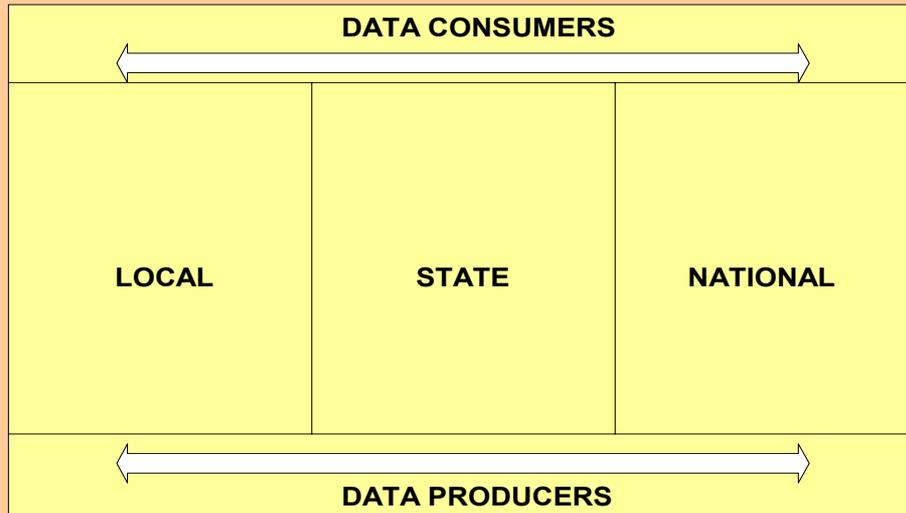
The National Spatial Data Infrastructure (NSDI)

Relevant Federal Initiatives

- **The National Map (TNM)**
 - Compilation and integration of consistent, high-quality nationwide data sets from the “best sources” for 7 Framework Layers (and Structures)
 - Are your data sets part of it (or should they be)? RE: GAASC survey on “RAMONA”
- **Geospatial One-Stop (GOS)**
 - Portal for access to nationwide data and metadata
 - A pointer to the best source (or is it?)
- **50 States Initiative**
 - Effort to catalyze creation of NSDI
 - Collaboration between:
 - National States Geospatial Information Council (NSGIC)
 - Federal Geographic Data Committee (FGDC)
 - Provided the Cooperative Agreement Program (CAP) grant funding for this project and planning guidance

NSDI Goal: Cross-Governmental Data Sharing

National Spatial Data Infrastructure (NSDI)



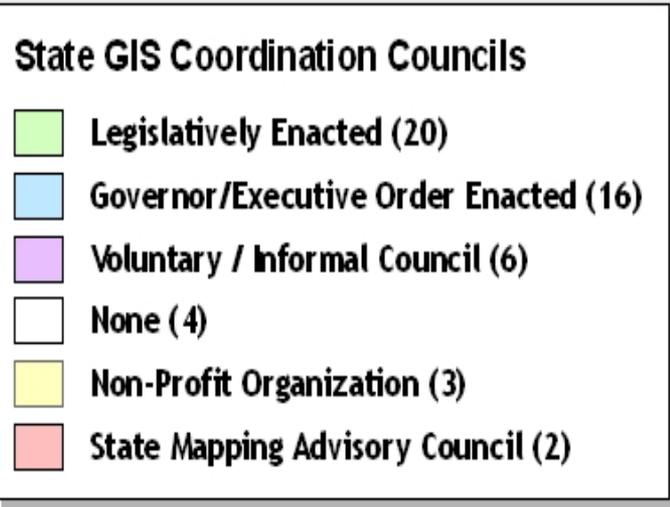
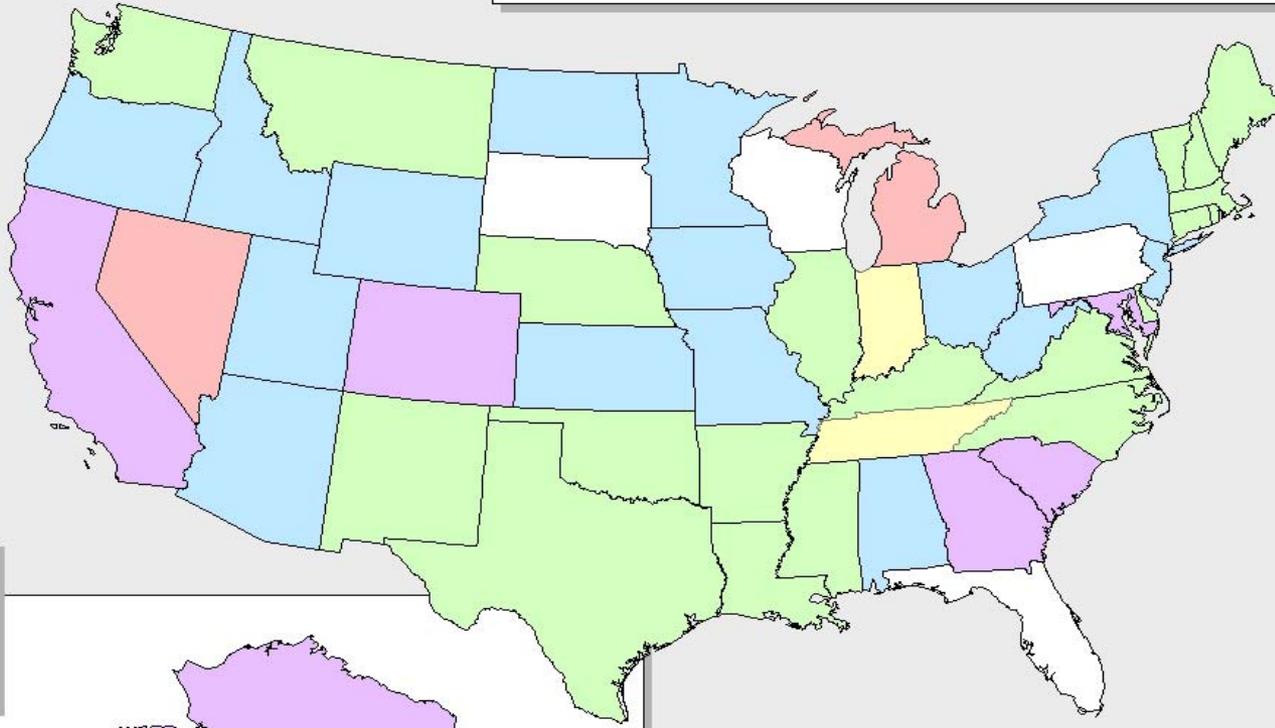
“Supply Chain” View

NSDI Framework Layers

- 1) Geodetic Control
- 2) Cadastral (parcels)
- 3) Political Boundaries
- 4) Hydrography
- 5) Imagery (orthos)
- 6) Elevation
- 7) Transportation
(i.e., Roads, Air, Rail, Transit, Inland waterways...)

... and Structures

State GIS Coordination Councils



What are other CAP Grant recipients doing?

Priorities vary from State-to-State

- Develop and Sustain Maintenance of 'Statewide' Data Layers
 - The **Kansas, Massachusetts and New York** plans are focused on key data layers and data infrastructure for sharing, e.g.:
 - Orthos
 - Parcels
 - Elevation
 - Addresses
 - Critical infrastructure

What are other CAP Grant recipients doing?

Priorities vary from State-to-State

- Improve GIS Governance
 - The **New Hampshire, Wyoming, Connecticut, and Colorado** plans are centered on the creation of a state-level **Geospatial Information Officer (GIO)** role and a GIS Support Office; **Pennsylvania** is focused on establishing a true **Statewide Council**; the **District of Columbia** is broadening the permanent membership on its GIS Steering Committee and **reaching out to executive leadership and diverse stakeholders**
- Capitalize on New Technology
 - The **Rhode Island and Utah** efforts are focused on building a **multi-departmental enterprise architecture** with data warehousing and web services

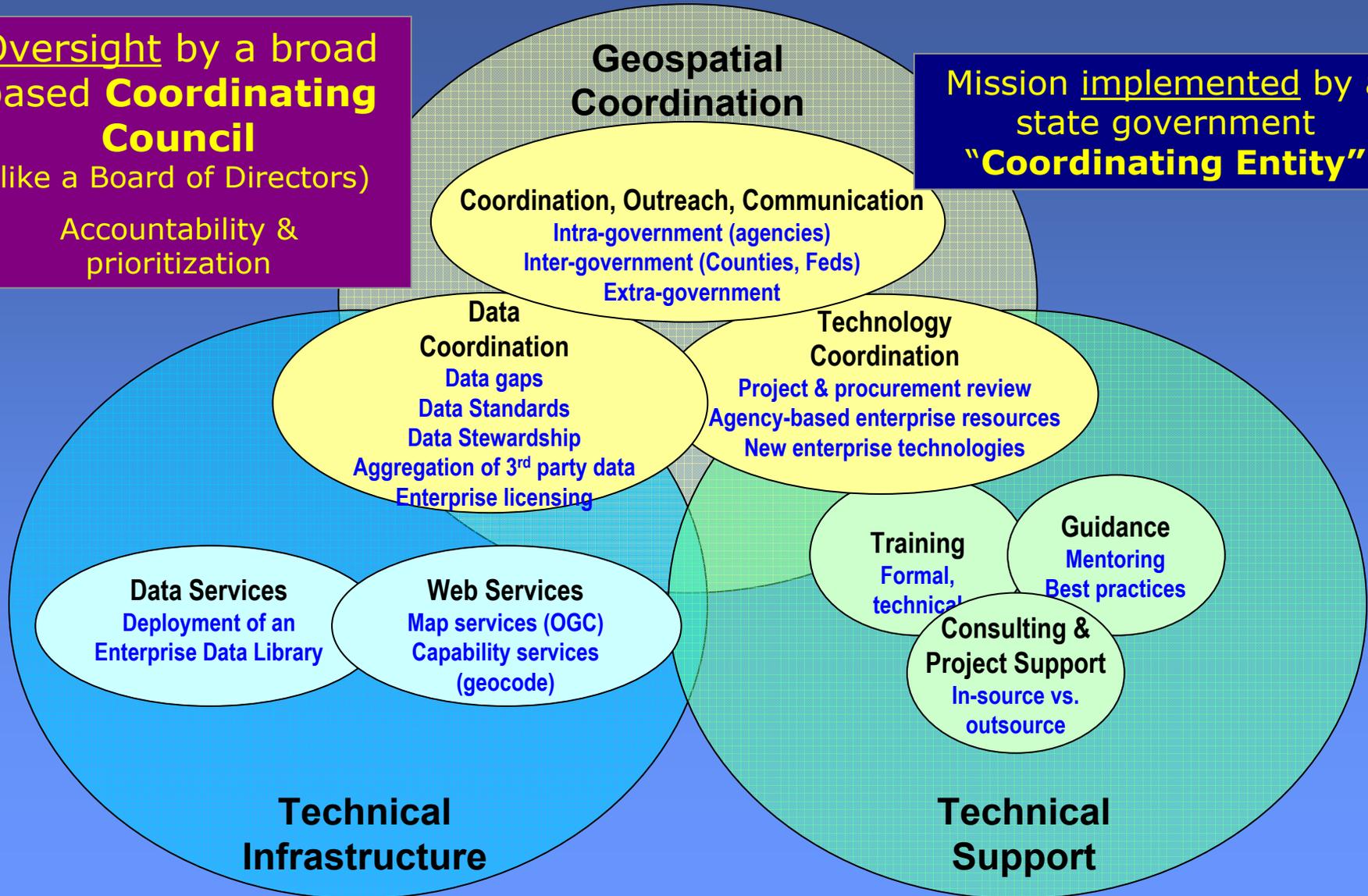
Minnesota's Emerging Model for GIS Coordination

Oversight by a broad based **Coordinating Council**

(like a Board of Directors)

Accountability & prioritization

Mission implemented by a state government **"Coordinating Entity"**





South Carolina Geographic Information Systems

[Calendar of Events](#) |
 [Data](#) |
 [Document](#) |
 [GIS Resources](#) |
 [Make-A-Map](#) |
 [Projects & Opportunities](#) |
 [SCGIS Home](#)

Geographic Information Council Members

GIS Viewers



Get the ESRI ArcGIS Explorer a way to view and share information geographically. **ArcGIS Explorer is free** and freely distributable, making it a great way to share your maps with others.

[ESRI ArcGIS Support](#)

[Intergraph Support](#)

Data

This portion of the site is intended to act as a general GIS data download location. This section shall include multiple organizations download locations. If you do not find a particular data set, please [contact us](#) and we will assist you.

If you are a South Carolina organization/agency and would like to be listed for download/access - please [contact us](#). We are interested in all data sets available as possible. You do not have to be a state agency to be listed here.

- [SC Geodetic Survey](#)
- [SC Department of Commerce](#)
- [SC Department of Health and Environmental Control](#)
- [SC Department of Natural Resources](#)
<http://www.dnr.sc.gov/GIS/qisdownload.html>
- [SC Department of Probation Parole and Pardon Services](#)
- [SC Department of Transportation](#)
- [SC Forestry Commission](#)
- [SC Office of Research and Statistics](#)

Department of Health and Environmental Control

The links below will take you to the download location for DHEC. Most of the layers are available for immediate download via one or more formats - ArcView Shapefiles, File GeoDatabase, or Google Earth File (KMZ). A few of the layers require FOI requests. If required, it will indicate so in the downloads section.

The listing of the layers is provided here to allow for text-based searches of available data layers while on this site in order to assist you with finding what you need.

Layer Name (click to download)	Data Source
Air Monitoring Stations	Bureau of Air Quality
Air Regulated Facilities	Bureau of Air Quality
Inactive Air Monitoring Stations	Bureau of Air Quality
401 Public Notices	Bureau of Water
Ambient Ground Water Quality Stations	Bureau of Water
Beach Monitoring Stations	Bureau of Water
Capacity Use Wells	Bureau of Water
Fish Advisory (Polygonal)	Bureau of Water
Fish Advisory Streams	Bureau of Water
Fish Tissue Monitoring Sites	Bureau of Water
Macroinvertebrate Stations	Bureau of Water
Modeled Stream Segments	Bureau of Water
National Pollutant Discharge Elimination System	Bureau of Water
Nationwide Water Permits	Bureau of Water
Navigable Lakes	Bureau of Water
Navigable Streams	Bureau of Water
Navigable Water Permits	Bureau of Water

<http://gis.sc.gov>

mySCmap - Interactive Viewer

Zoom

Query

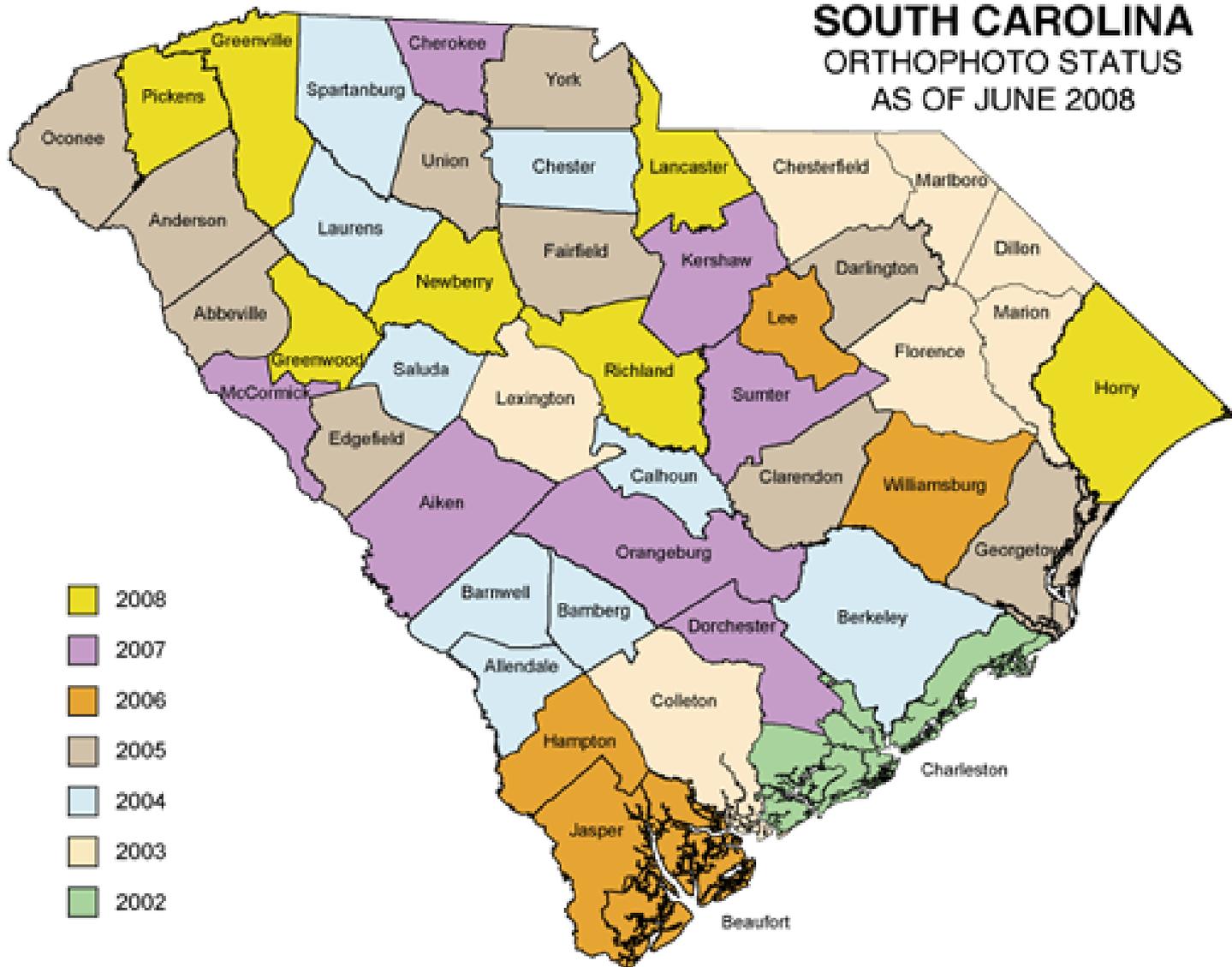
Tools

Documents

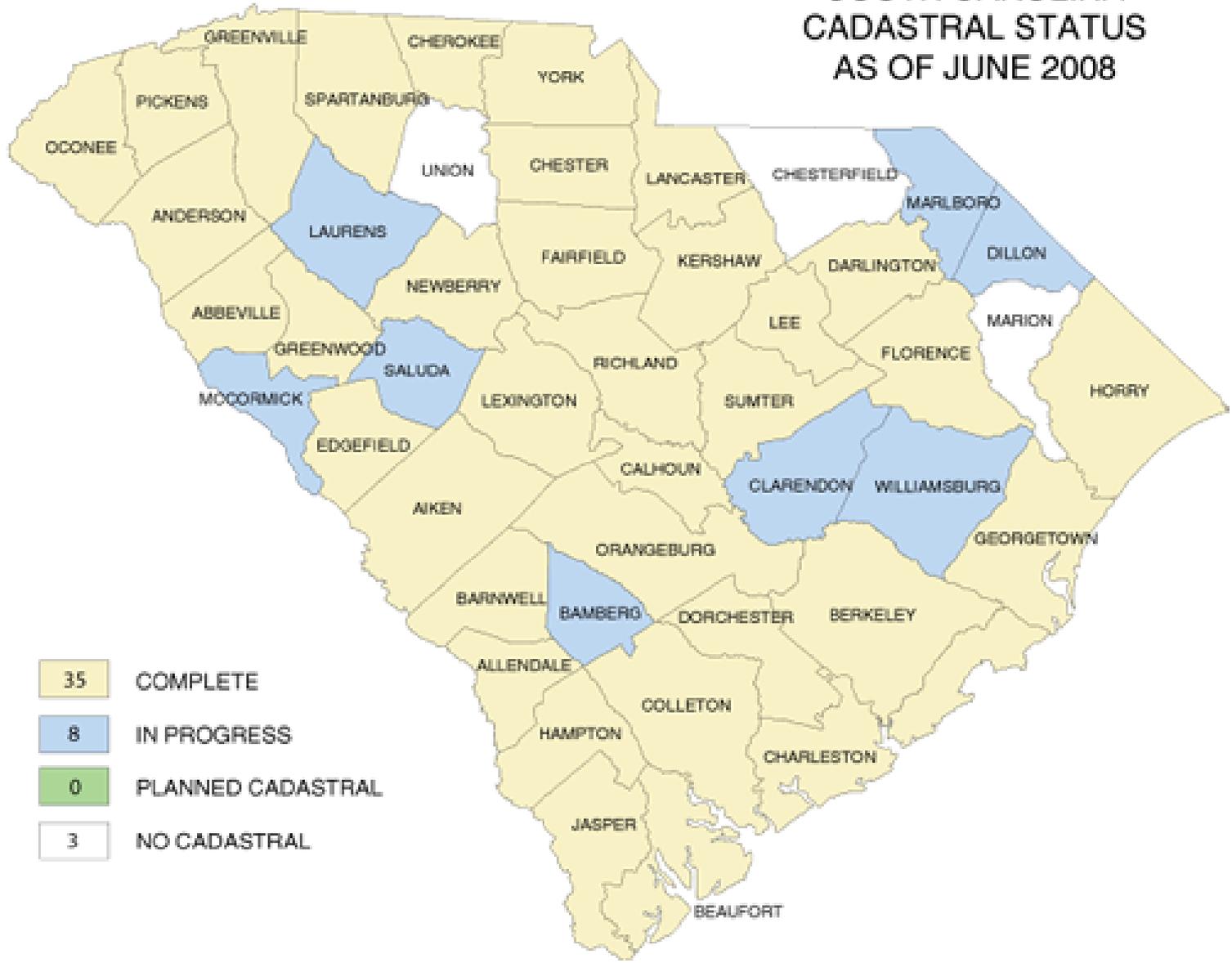


- mySCMap-Contributors
- National Atlas State Labels
- National Atlas States
- National Atlas County Labels 2001
- National Atlas Counties
- Urban Area Public Data Coverage
- Urban Area View Only Data Coverage
- ▼ Hydrography**
 - National Atlas and NHD Streams
 - National Atlas and NHD Waterbodies
- ▼ Imagery**
 - SCDNR - DOQQ 2006 (CIR)
 - SCDNR - DOQQ 1999 (CIR)
 - SCDNR - DOQQ 1994 (CIR)
 - SCDNR - DRG 1:24,000 Scale
 - DOQQ Color Mosaicked Image
 - DOQQ Black and White Mosaicked Image (East)
 - LANDSAT7
- Elevation**

SOUTH CAROLINA ORTHOPHOTO STATUS AS OF JUNE 2008

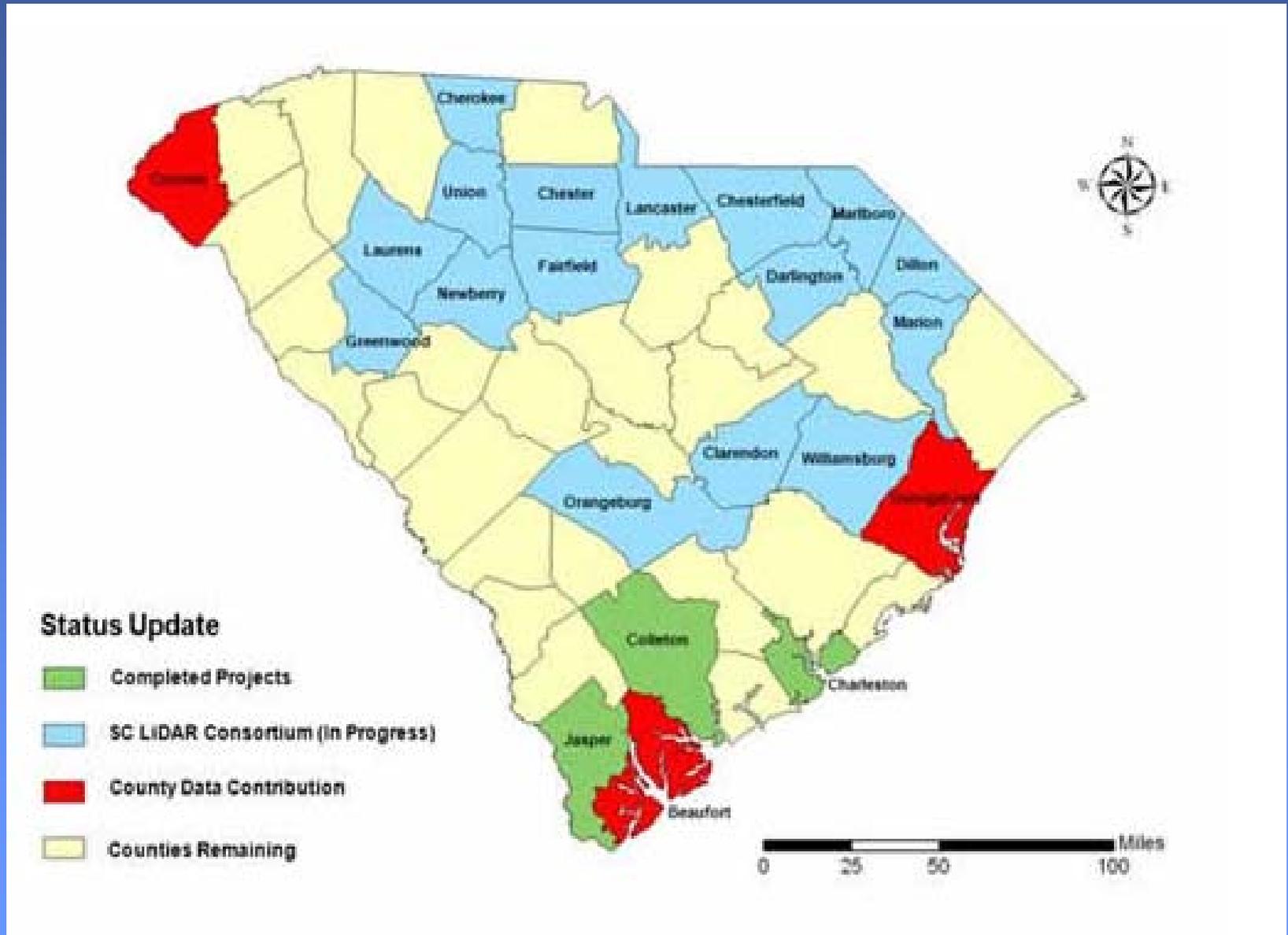


SOUTH CAROLINA CADASTRAL STATUS AS OF JUNE 2008

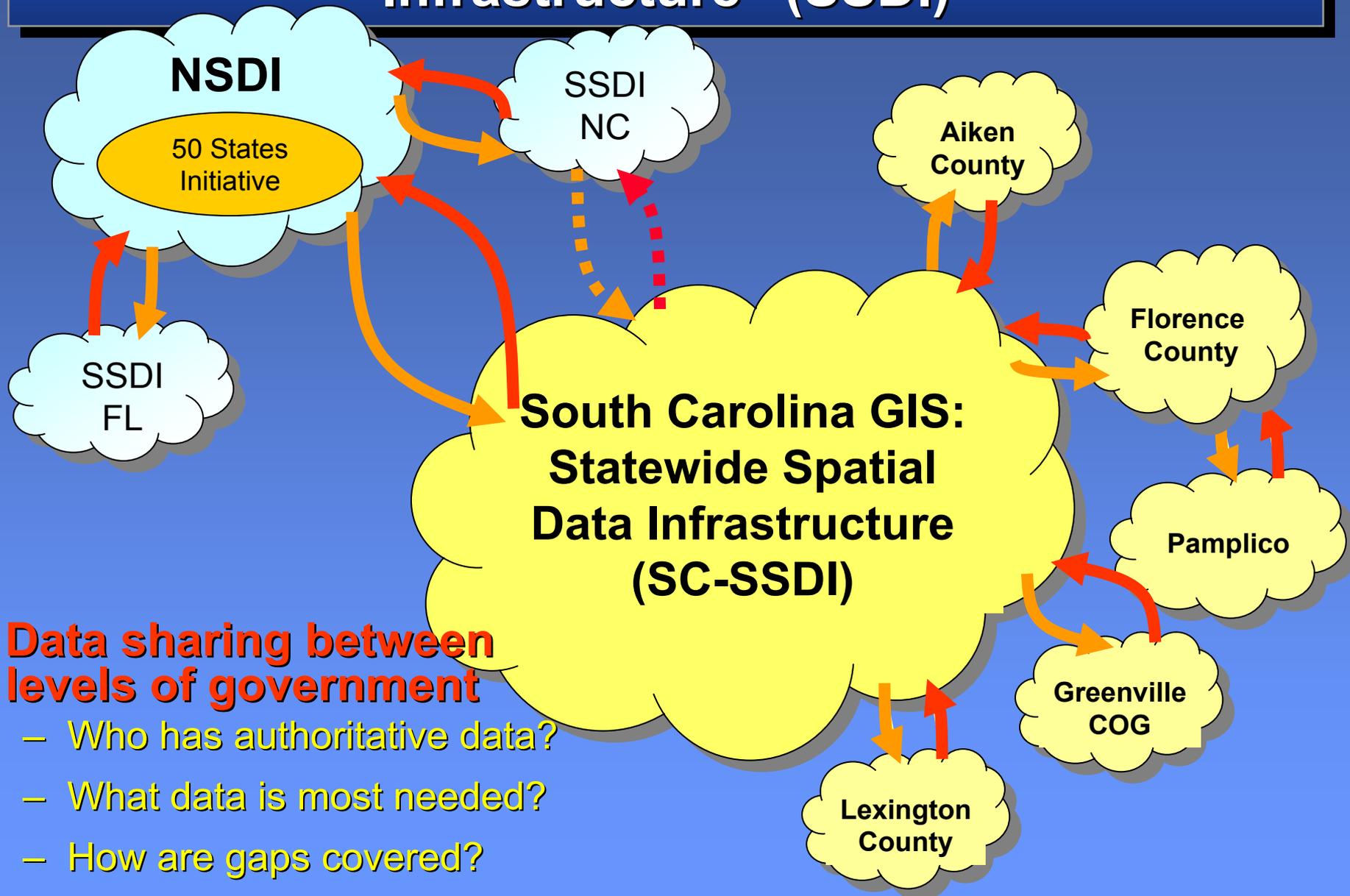


35	COMPLETE
8	IN PROGRESS
0	PLANNED CADASTRAL
3	NO CADASTRAL

Statewide LiDAR Project Status



Conceptual “Statewide Spatial Data Infrastructure” (SSDI)



- **Data sharing between levels of government**

- Who has authoritative data?
- What data is most needed?
- How are gaps covered?

SC GIS State Outreach:

Project Overview

- **Kickoff Communication & Coordination**
- **Regional Workshop Planning Meeting**
- **Several One-On-One Interviews**
- **On-line Survey Questionnaire**
- **Five (5) Regional Stakeholder Meetings**
- **Preliminary Findings & Recommendations**
- **Ongoing, Iterative Interaction with SC GIC**
- **Development of a Strategic Plan**

SC GIS State Outreach Survey



South Carolina Geographic Information Systems

[Exit this survey](#)
>>

South Carolina Strategic Plan Survey v1

Thank you in advance for taking the time to complete this brief survey on GIS activity in South Carolina as part of the statewide GIS Strategic Planning project.

This brief, survey is designed to take approximately 20 minutes of your time. Please answer the questions below using your best judgment and the information that you have available. None of the questions are mandatory so you can skip questions that aren't relevant or that you aren't comfortable answering. Please use the last question to let us know if you have any suggestions for improving GIS in South Carolina, or for improving this survey.

Once again, thank you for your participation in the statewide GIS strategic planning process.

1. Please, tell us about yourself.

Name:

Organization:

Title:

Address:

City/Town/Region:

State/Province:

ZIP/Postal Code:

2. Which category best describes your organization?

- Municipality pop: <1,000
- Municipality pop: 1,000-10,000
- Regional Planning Organization
- Tribal

SC GIS State Outreach Survey

Results: *Preliminary*

Does your organization produce GIS/geospatial data?

Yes	82.8%
No	17.2%

SC GIS State Outreach Survey

Results: *Preliminary*

What are the primary business uses of your geospatial data?

Community Planning	76.2%
Asset Management	73.9%
E911	70.0%
Environmental	54.5%
Parcel Recording	42.1%

SC GIS State Outreach Survey

Results: *Preliminary*

What are the secondary business uses of your geospatial data?

Transportation Planning	56.5%
Health	46.7%
Economic Development	45.5%
Environmental	40.9%
Education	33.3%

SC GIS State Outreach Survey

Results: *Preliminary*

What are the major challenges to increasing GIS in your organization?

Need More GIS Training	46.4%
Cost of Data Collection	46.4%
Data Availability	42.9%
Data Sharing Issues	42.9%
Need More GIS Staff	42.9%

SC GIS State Outreach Survey

Results: *Preliminary*

What services should be the top priorities for SC GIS?

Funding and grants to support GIS	67.9%
Data for Download	65.5%
Statewide GIS Policy Development	60.7%
Statewide GIS Strategic Planning	53.6%
Training	51.7%



Greenville COG, Nov 19th

Florence County Library, Nov 12th

Columbia - Harbison State Forest Conf Center, Nov 13th

Aiken Electric Cooperative, Nov 18th

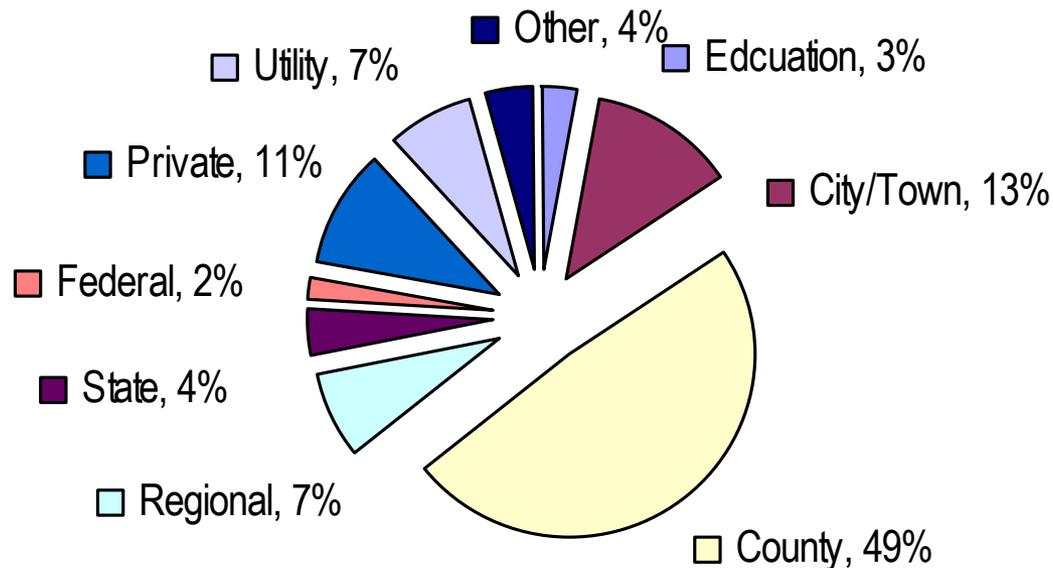
Walterboro Council Chambers, Nov 20th

© 2008 Tele Atlas

© 2007 Google™

Workshop Demographics

GIS Strategic Planning Workshop Registration Statewide



Roles & Responsibilities

- **Regional GIS Stakeholders: Issues & Ideas**
 - Identify issues
 - Help establish priorities
 - Speak freely
- **AppGeo: Facilitator & Scribe**
 - Facilitate planning process
 - Survey the stakeholders
 - Lend our experience
 - Author the documents

What might the future look like in SC?

- Will there be a Statewide Spatial Data Infrastructure (SSDI) for:
 - Talent development and mentoring?
 - Repeatable data exchange and updating?
 - Reasonable standards and specifications?
 - Sustainable funding and equitable cost sharing?
 - Minimized duplication of effort and maximized return on GIS investments, statewide?
- Will there be measurable goals?
- Is there a common “vision” to achieve an SSDI?

What Data Sets and Services are Desirable in South Carolina?

- A statewide basemap?
- A geocoding service (send an address, get an accurate geographic point)?
- Key data layers?
- Applications?

What Data Sets and Services are Desirable in SC? *(continued)*

- **Where can economies-of-scale be achieved by acquiring data over larger areas?**
 - Orthoimagery
 - LiDAR
 - Other?
- **What data is inherently local?**
 - Parcels
 - Roads
 - Other?

BREAK

Brief History of SC GIS Activity: Over 30 Years

- **1976:** GIS taught at University of South Carolina
- **1978:** State Mapping Advisory Committee (SMAC)
- **1983:** City of Greenville implemented GIS
- **1997:** SC DNR established Data Clearinghouse
- **1997:** Standing Committee on Geographic Information (SCGI) formed
- **1999:** Needs Assessment on Statewide GIS
- **2001:** Strategic Plan for Statewide GIS Technology Coordination in South Carolina -- “Take One”
- **2006:** South Carolina Geographic Information Council (SCGIC) formed
- **2007:** State GIS Coordinator hired
- **2008:** Strategic Plan “Take Two”

Strategic Plan “Take One”: *SCGI & Plangraphics, 2001*

- “Strategic Plan for Statewide GIS Technology Coordination in South Carolina” (2001)
 - **Mission Statement:** “To facilitate, coordinate, and promote the effective development, sharing, and use of geographic information within South Carolina for the benefit of citizens.”

Strategic Plan “Take One”: *SCGI & Plangraphics, 2001*

Strategic Goals (2001):

1. Define and put in place an **organizational structure and institutional relationships** to support Statewide GIS coordination and use.
2. Create **policies, procedures, and tools to encourage and enable joint GIS development and access** and pursue joint projects.
3. **Build and maintain geographic data** important for users Statewide.
4. Establish a **formal process and technical infrastructure for providing GIS data and services**.
5. Establish, manage, and provide **outreach and educational programs and services**.
6. Explore and pursue **effective partnerships and funding strategies** to support GIS initiatives.

Strategic Plan “Take Two”: *SCGIC & Applied Geographics*

Strategic Planning Approach: **Key Aspects**

- Outreach to Local Government and Regional Stakeholders
- Get Your Input On:
 - STRENGTHS
 - WEAKNESSES
 - OPPORTUNITIES
 - THREATS

Questions for Regional Stakeholders?

- Feedback on the status quo
 - Strengths?
 - Weaknesses?
- What improvements are possible?
 - Opportunities?
- What are the barriers to success?
 - Threats?

Sample ***“Sound bites”*** from Florence County Workshop (11/12/08)

- **SC’s greatest strength:** “Quality data at the local level...”
- **Greatest weakness:** “Forty-six stovepipes of non-standardized data...”
- **Opportunity:** “Incentive programs to share data and implement sensible standards...”
- **Threats:** “Reduced competitiveness in a sophisticated global economy...”

Sample “*Sound bites*” from Columbia Workshop (11/13/08)

- **SC’s greatest strength:** Agreement with Florence, **PLUS** “Quality people at the state and local level...”
- **Greatest weakness:** Agreement with Florence, **BUT** “Why only Forty-six stovepipes? There are way more than 46 stovepipes!”
- **Opportunity:** “To attract geospatial industry to SC...”
- **Threats:** “Failure to move forward in a well-endorsed and supported direction with united leadership...”

Sample **“Sound bites”** from Aiken Workshop (11/18/08)

- **SC’s greatest strength:** “Practical GIS knowledge, including success stories and lessons-learned...”
- **Greatest weakness:** “GIS have-nots – not all cities and counties have GIS or quality data; and we are not fully prepared for another Hurricane Hugo
- **Opportunity:** “To be the best at something as a State: e.g. GIS applications that support wise decisions for the Health and Safety of citizens...”
 - Statewide Street Centerlines: “Finish the job! Make fully routable and keep up-to-date...”
- **Threats:** “To be the best at nothing, and for the places where we live to deteriorate due to poor decisions based on inadequate geographic information...”

Sample **“Sound bites”** from Greenville Workshop (11/19/08)

- **SC’s greatest strength:** “Sustained local government GIS programs that are recognized as essential...”
- **Greatest weakness:** “Lack of clear guidance from the State; things are too wide open, and there is no high-level champion for statewide GIS initiatives or policy...”
- **Opportunity:** “Pick a specific goal, get sign-off, and implement it...”
- **Threats:** “Too much talking, and not enough doing; frustration from planning without action...”

Sample “*Sound bites*” from Walterboro Workshop (11/20/08)

- **SC’s greatest strength:** “Existing models of success for inter-jurisdiction regional collaboration...” (e.g. the Berkeley County Consortium, and the Charleston Regional Development Alliance)
- **Greatest weakness:** “Data gaps in jurisdictions lacking resources for sustainable GIS programs at the local level...”
- **Opportunity:** “Muster the key state agency stakeholders in support of fully routable statewide centerlines; start with a pilot area as a proof-of-concept...”
- **Threats:** “Loss of credibility with local supporters if key state agencies can’t collaborate on statewide centerlines...”

**Remember:
The process is as
important as the plan!**

Thank you

Rich Grady

rgrady@appgeo.com

617-447-2455

