

# Land Use, Growth and Development

Issues addressed by a  
Subgroup of the Blount County  
Environmental Health Action Team

John Lamb - presenter

# Survey Results

“TOP FIVE” ISSUES and  
extended subgroup issues:

1.	Outdoor Air Quality	68.6 %
2.	Safe Drinking Water	60.3 %
3.	Surface Water Quality	54.6 %
4.	<b>Loss of Rural Land</b>	<b>42.9 %</b>
5.	Ground Water Quality	33 %
6.	<b>Urban Development</b>	<b>26 %</b>
9.	<b>Industrial Chemicals/Toxins</b>	<b>24 %</b>

# Land Use Is Different!

Value laden - range of opinions

Link to health still emerging

What to do about it elicits controversy

Positive arena to forge Planning and Public Health alliance - again

# Mini-grant

Independent facilitators – East Tennessee  
Community Design Center

“Community Discussions on Land Use and  
Public Health”

5 sessions – 50 participants

Story - population, land use and health

Identify values to help define issues

# Results of Community Consultation

Some saw linkage between almost all aspects of growth and a wide array of public health outcomes

Others focused more on specific issues such as air and water quality, and effects of growth and sprawl

Almost all appreciated rural character, but varied on how to address threats posed by growth

Some suggested limiting growth

# List of Issues Addressed

Growth and Sprawl

Loss of Rural Land

Roads and Traffic

Air Quality

Water Quality

Commercial & Industrial Uses

Development Design

Tree Preservation

# Growth and Sprawl

Scattered and dispersed pattern of development - separation of uses

Linked to lack of exercise (walking and biking)

Consequent issues of weight gain linked to health problems – heart disease, diabetes, cancer

# Growth and Sprawl Indicators

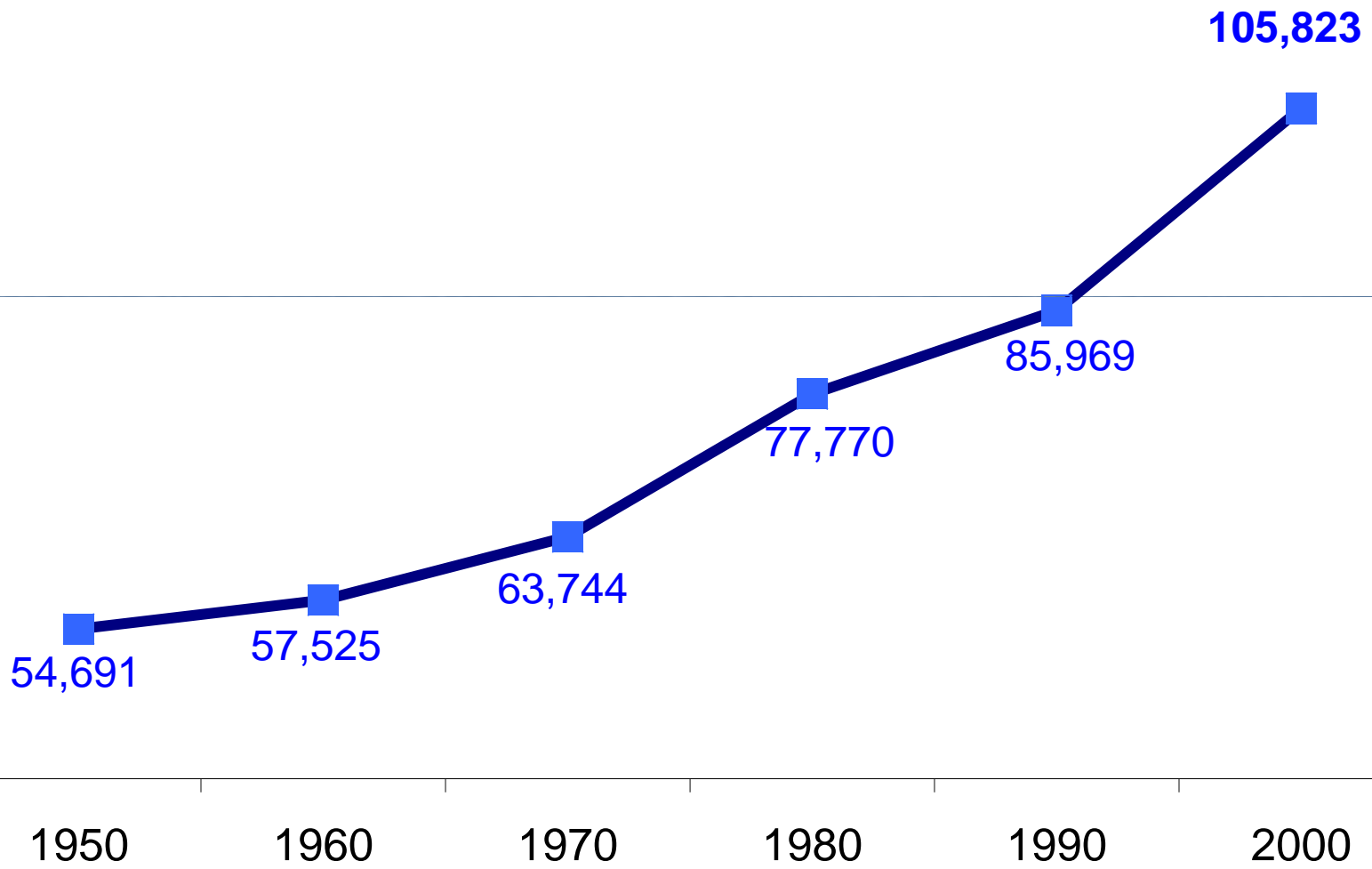
Census population trends as indicator of growth

No quantitative measures of sprawl

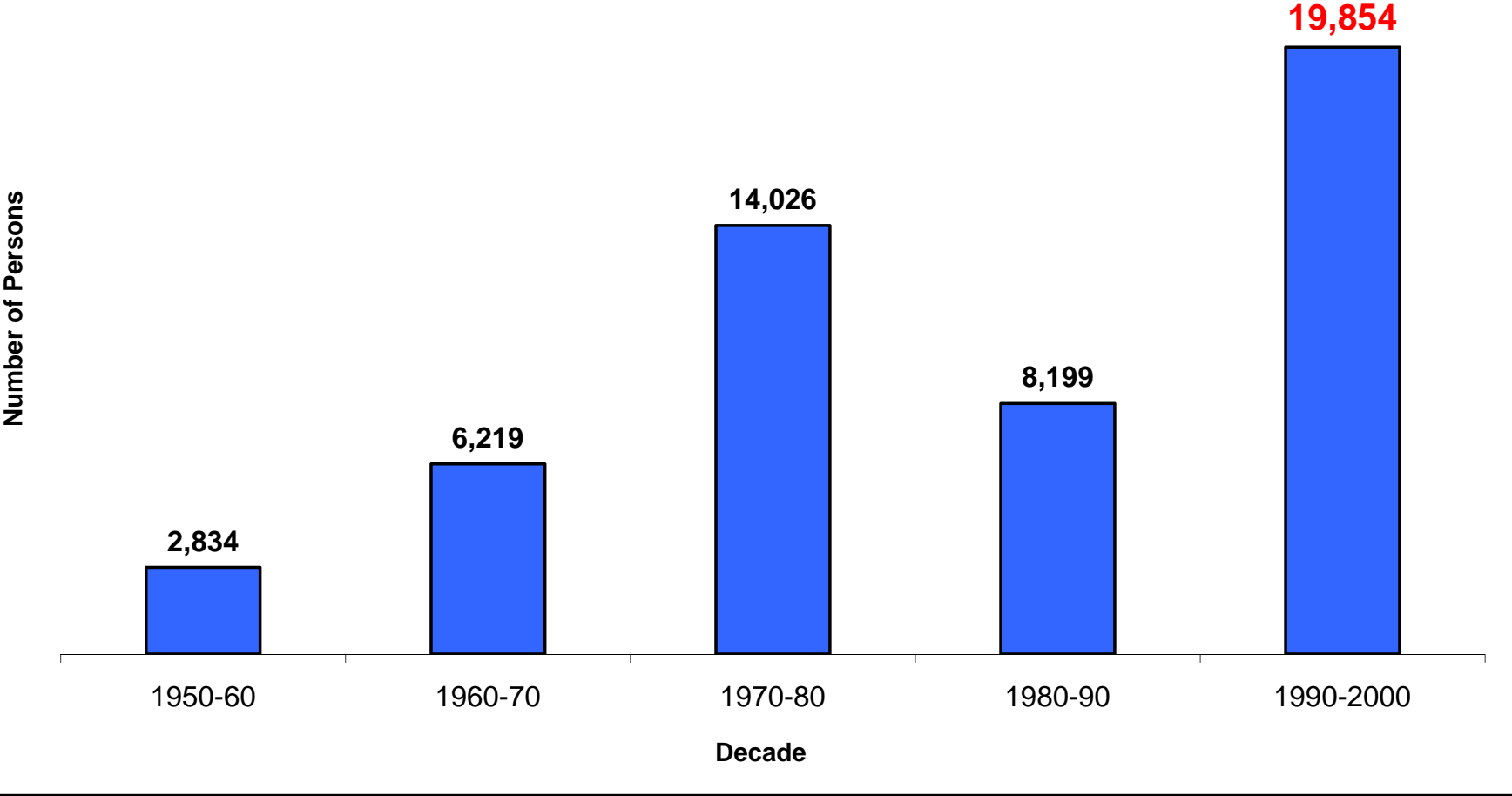
Substitute visual or qualitative indicator

Maps of residential structure age by decade from tax records – thanks to Trevor McMurray, Assessors Office

## Blount County Population 1950 to 2000



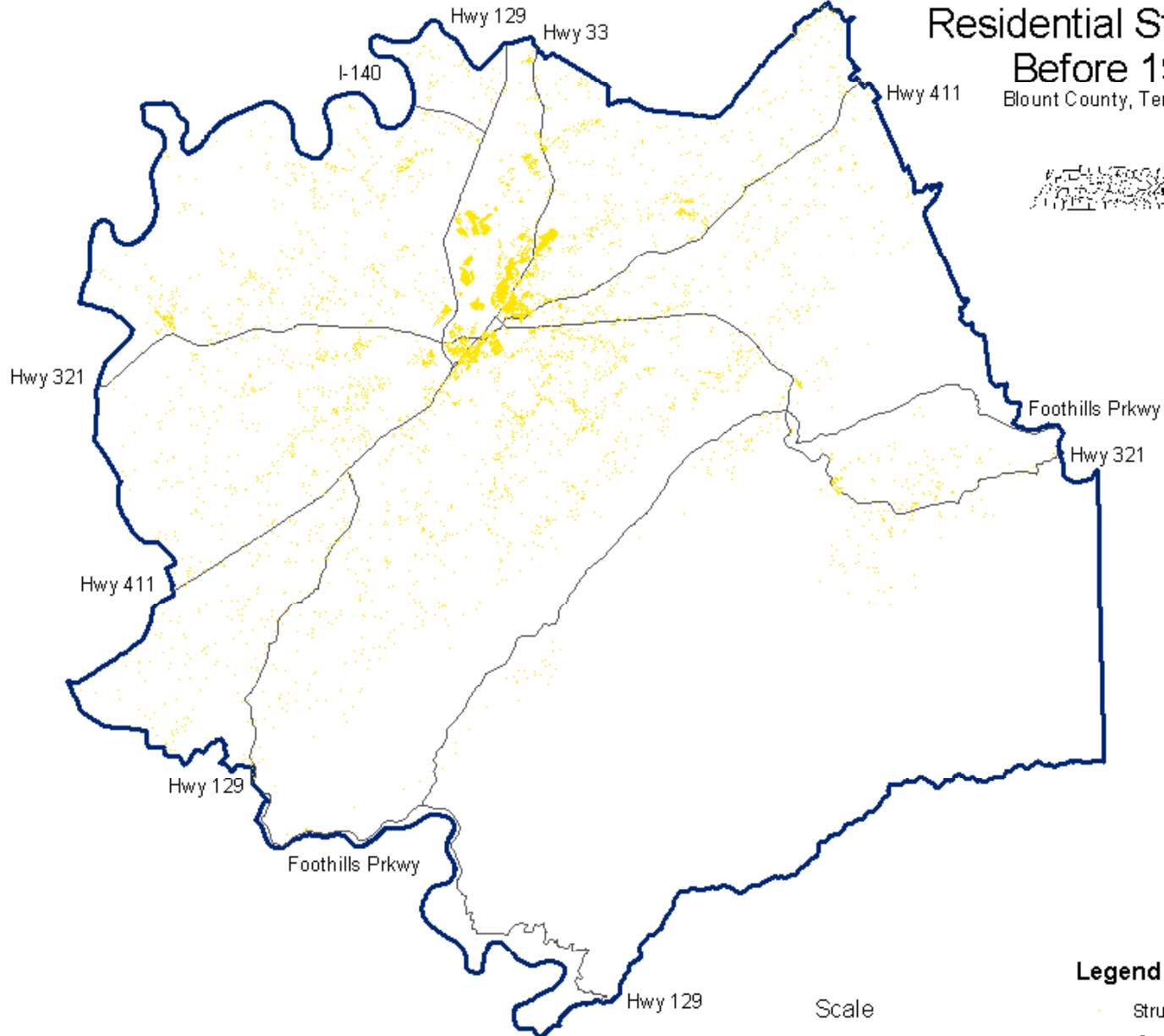
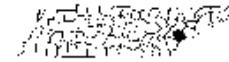
# Blount County Population Change 1950 to 2000



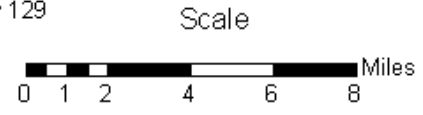


# Single Family Residential Structures Before 1950

Blount County, Tennessee



- Legend**
- Structures Before 1950
  - County Boundary
  - Arterial Route

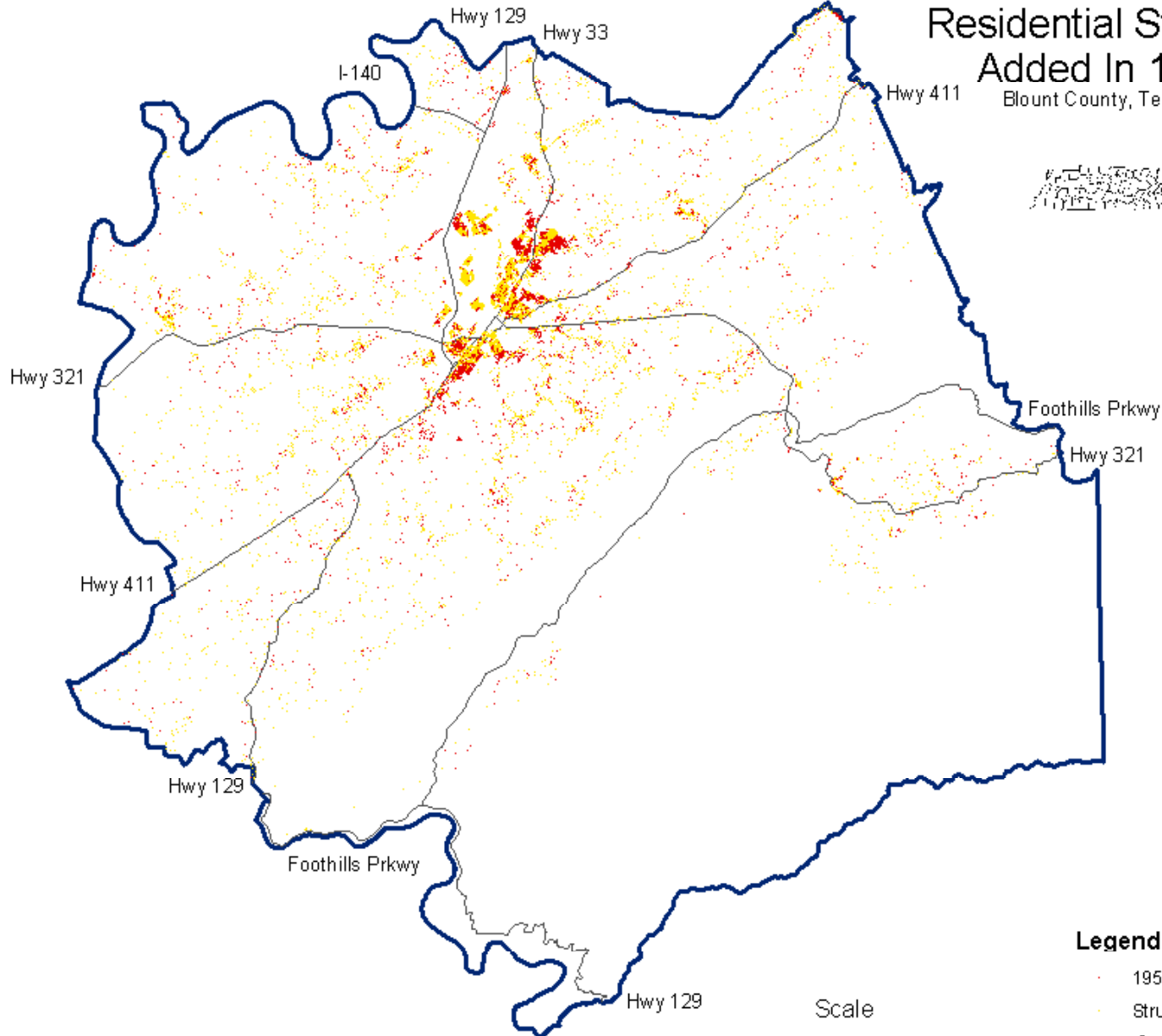
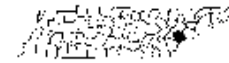


Trevor M. McMurray  
Blount County Property Assessor's Office  
source: Computer Assisted Appraisal System - State of Tennessee, Comptroller of the Treasury



# Single Family Residential Structures Added In 1950's

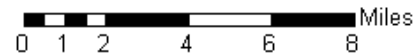
Blount County, Tennessee



### Legend

- 1950's Structures
- Structures Before 1950
- County Boundary
- Arterial Route

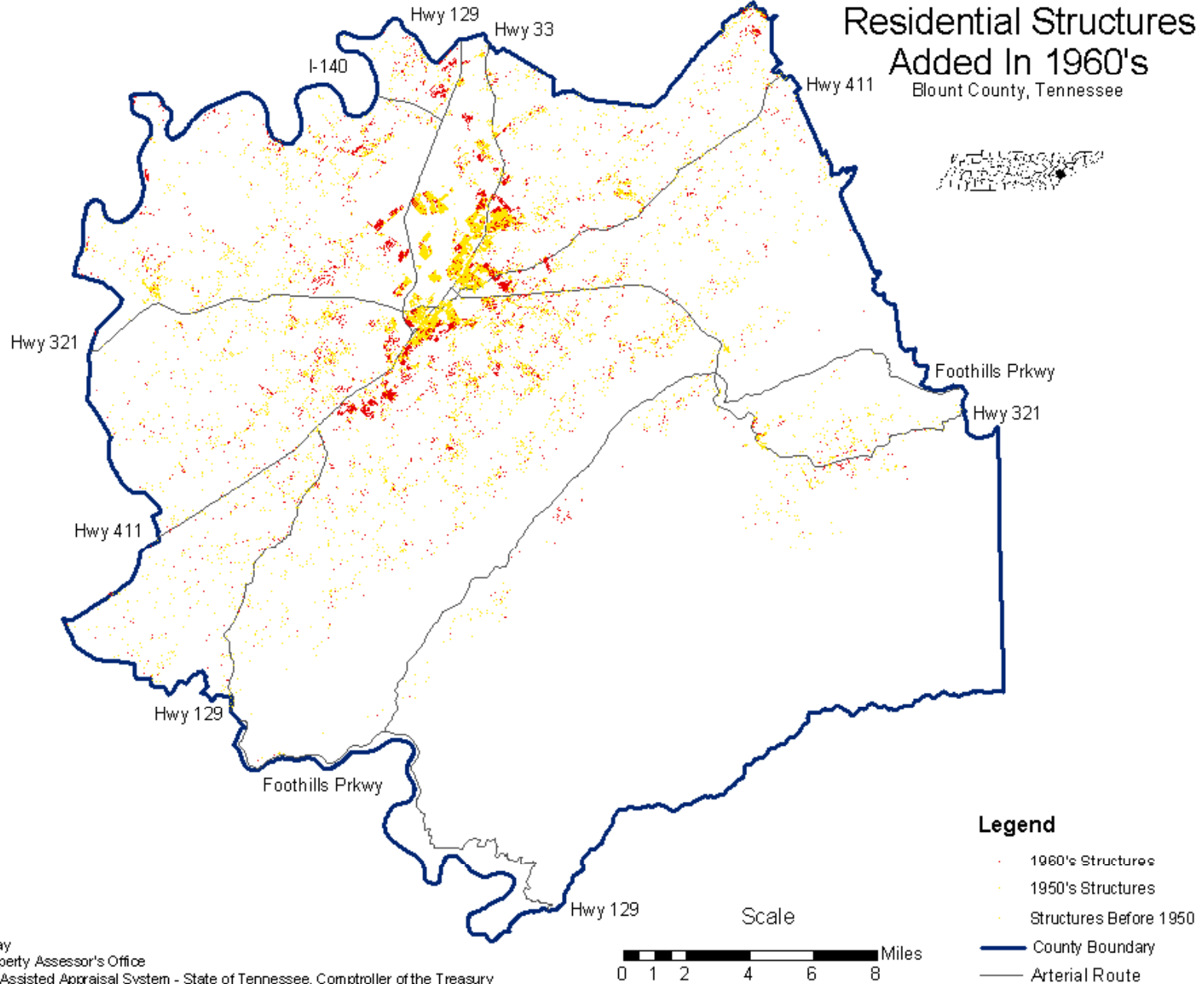
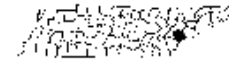
Scale





# Single Family Residential Structures Added In 1960's

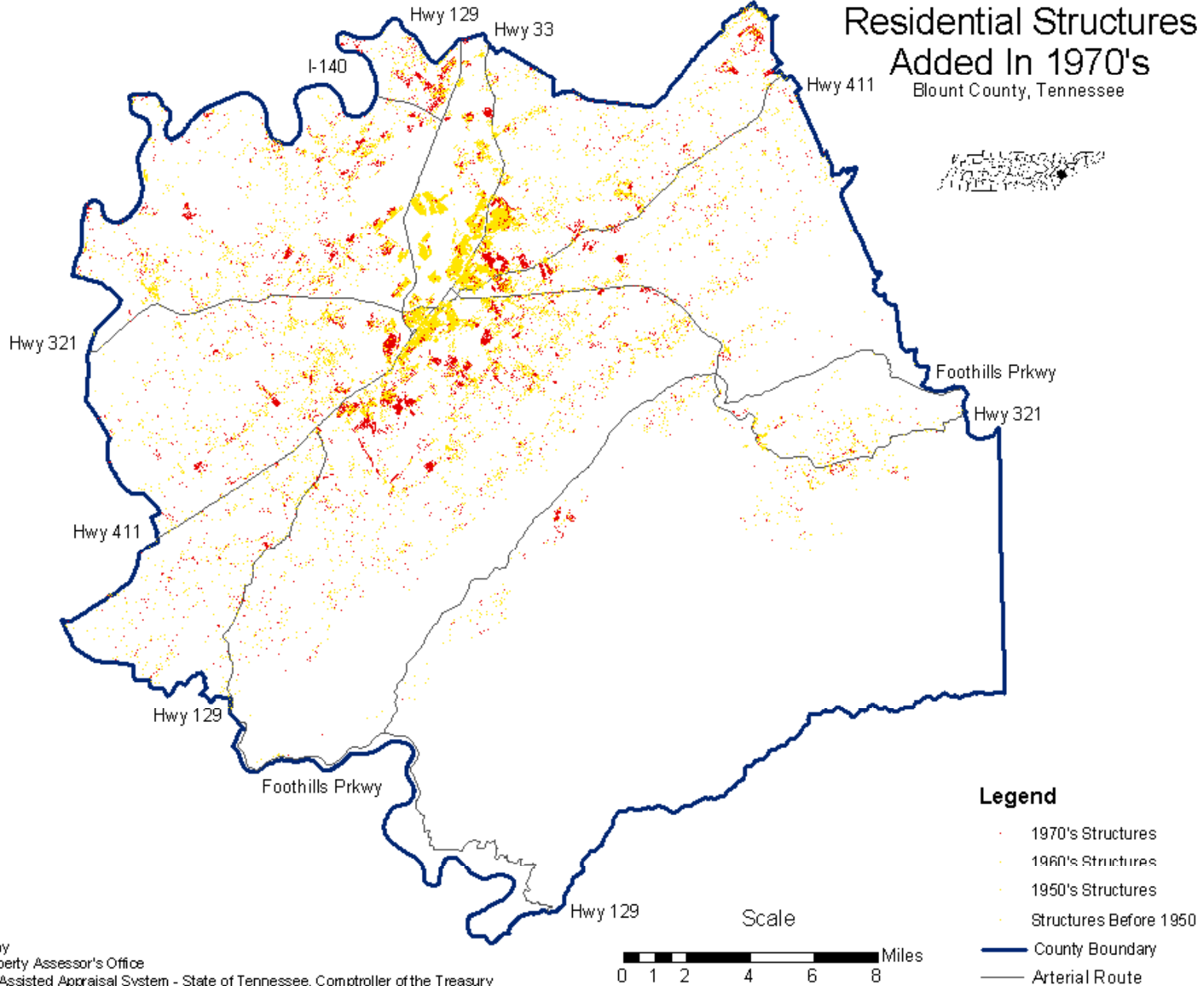
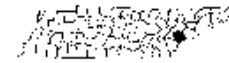
Blount County, Tennessee





# Single Family Residential Structures Added In 1970's

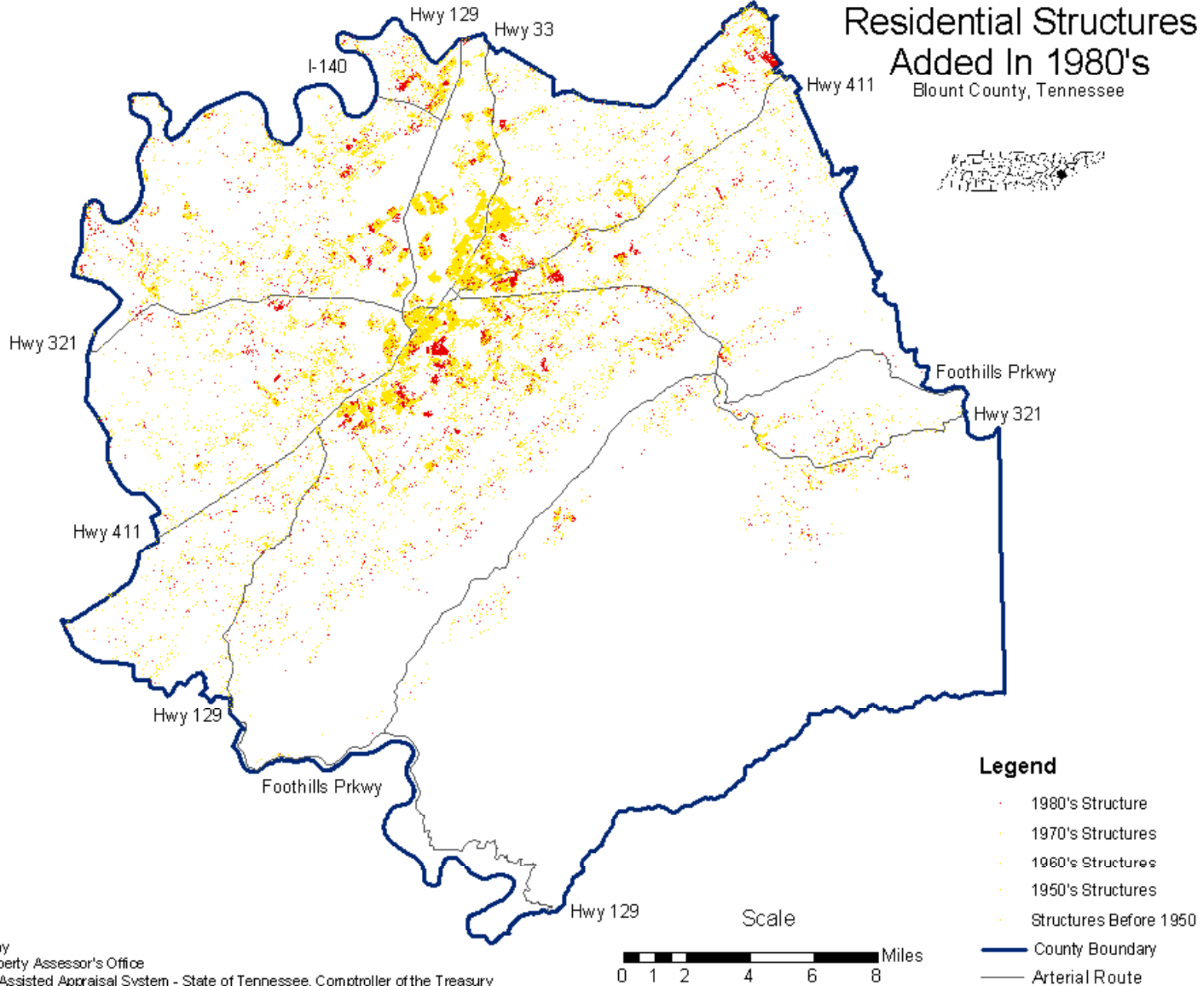
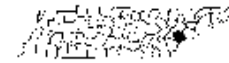
Blount County, Tennessee





# Single Family Residential Structures Added In 1980's

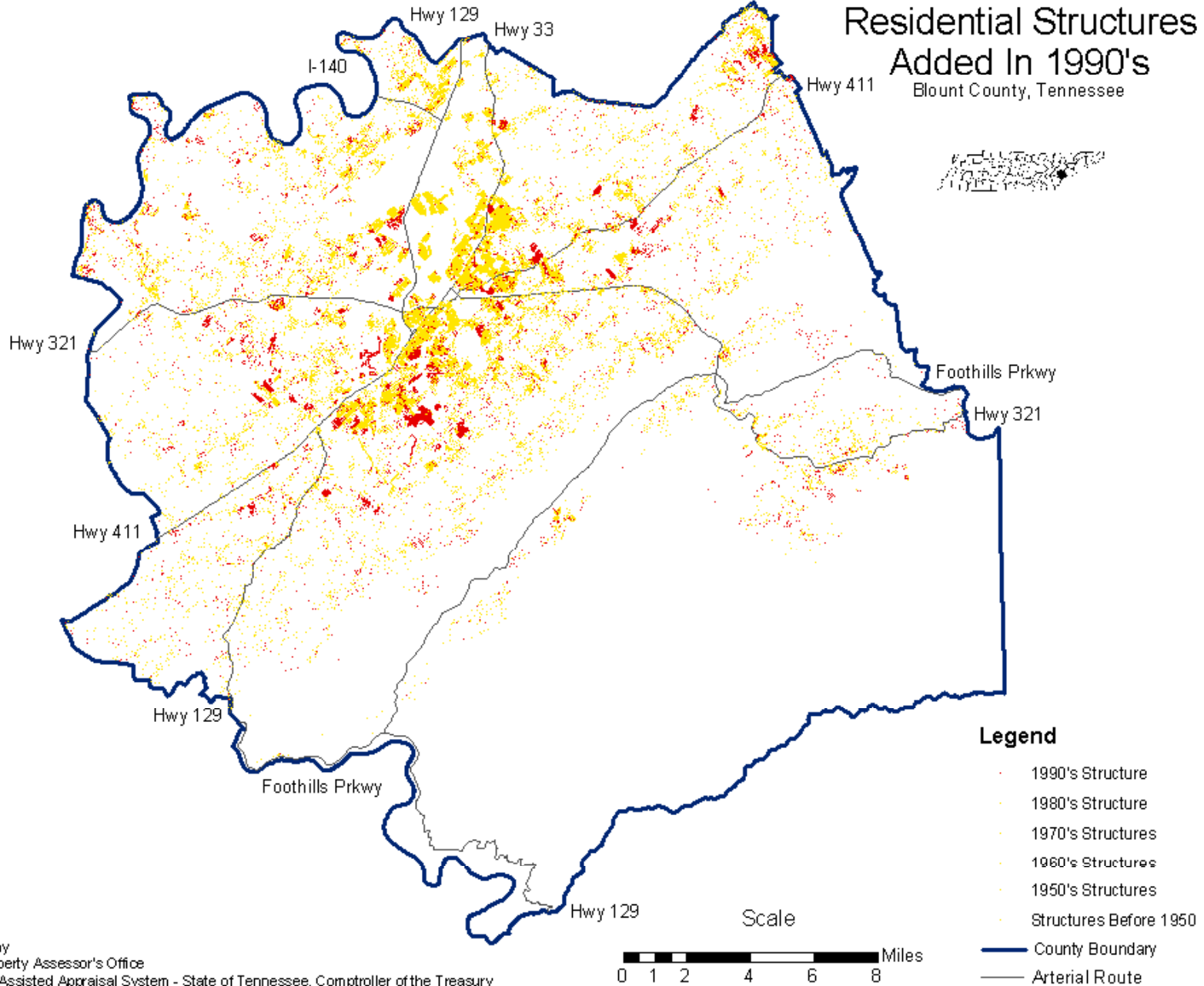
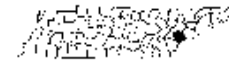
Blount County, Tennessee





# Single Family Residential Structures Added In 1990's

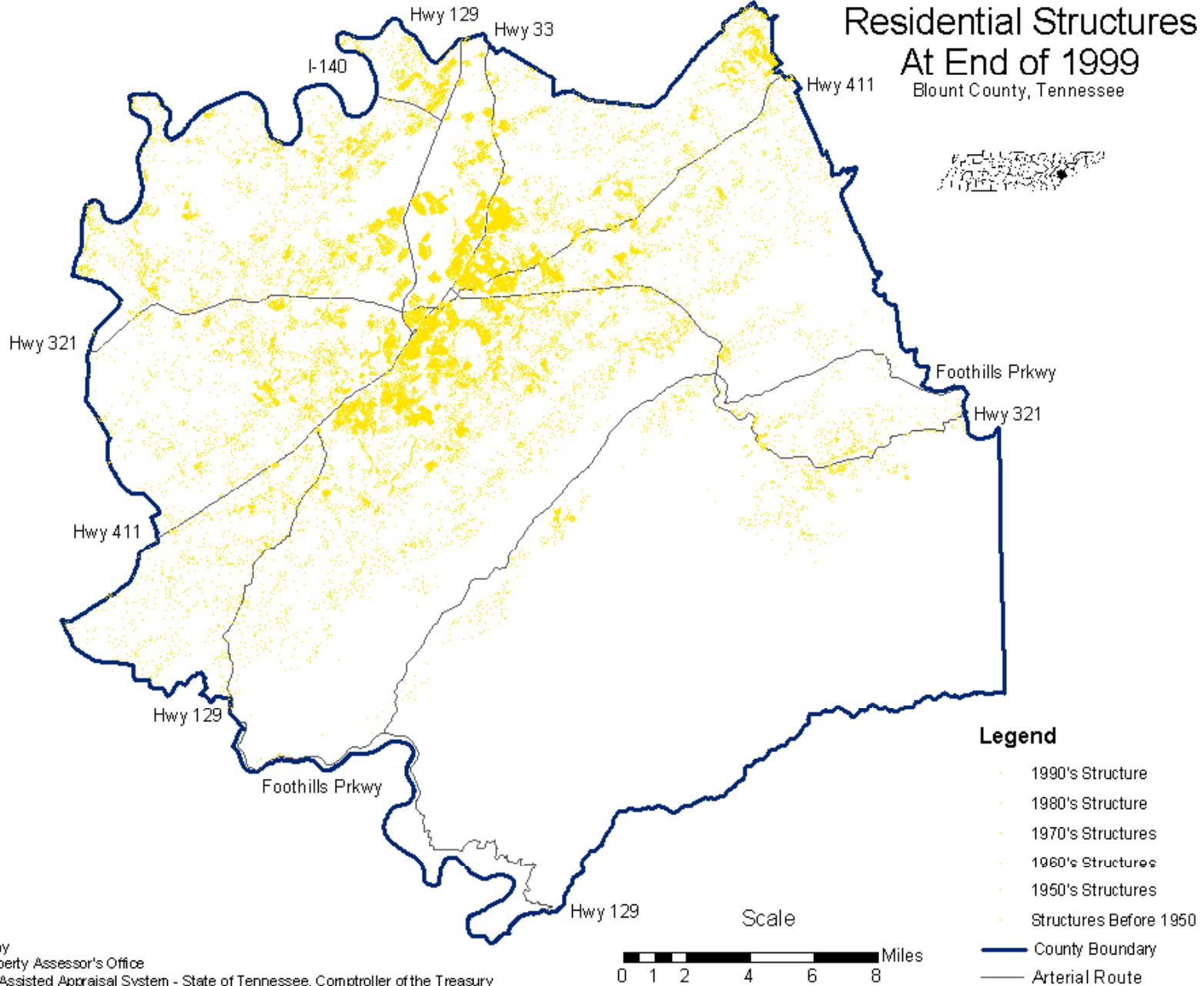
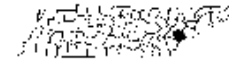
Blount County, Tennessee

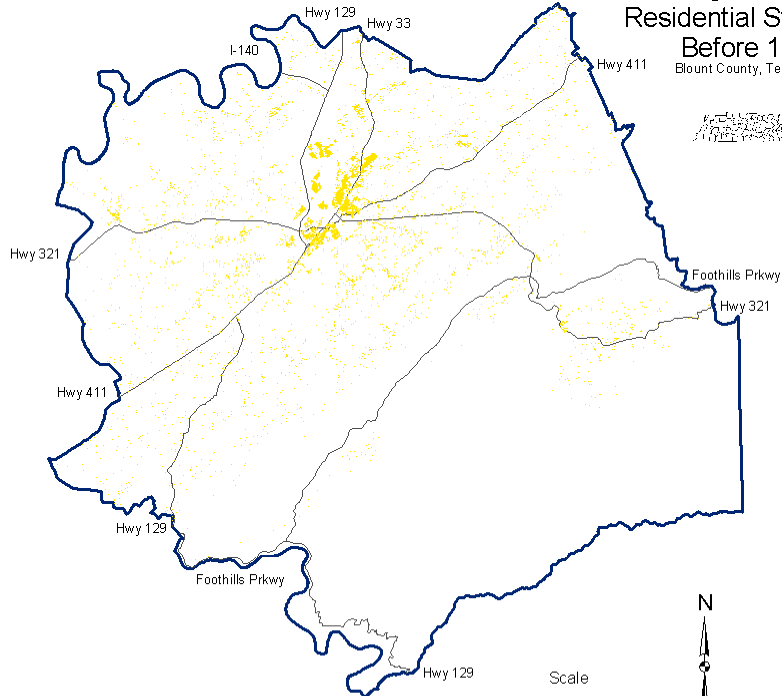




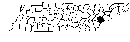
# Single Family Residential Structures At End of 1999

Blount County, Tennessee

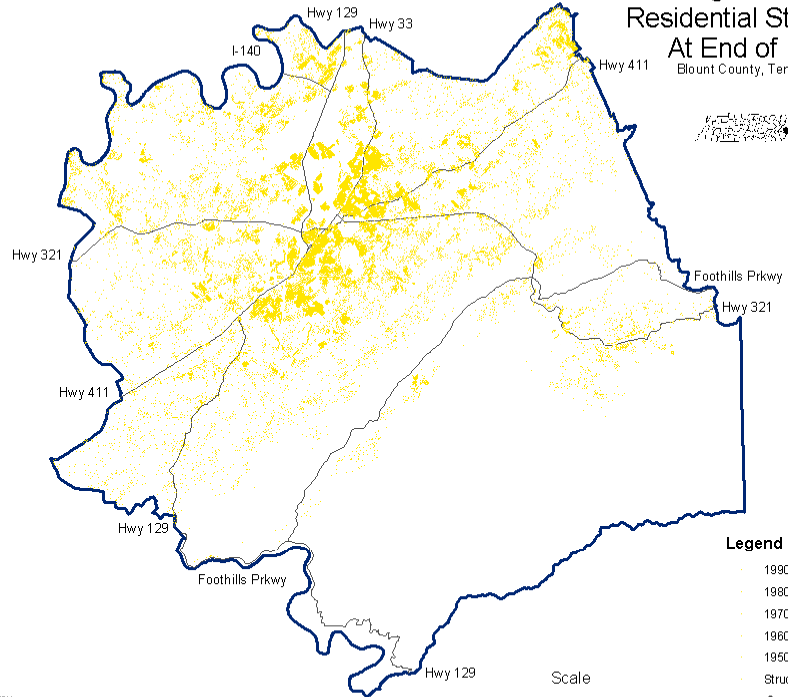
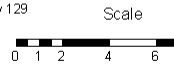




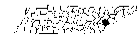
Single Family  
Residential Structures  
Before 1950  
Blount County, Tennessee



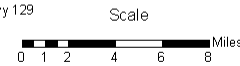
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Single Family  
Residential Structures  
At End of 1999  
Blount County, Tennessee



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**Legend**

- 1990's Structure
- 1980's Structure
- 1970's Structures
- 1960's Structures
- 1950's Structures
- Structures Before 1950
- County Boundary
- Arterial Route

# Growth and Sprawl Standards

Less sprawl is better than more sprawl

New development should be concentrated in and around the urban center of Maryville and Alcoa (UGB)

Track subdivision approvals and building permits

# Loss of Rural Land

No consensus on links to health

Depends on possible psychological link

No clear and definitive link in research

Implied health linkages were based more on personal values and preferences than on objective health outcomes

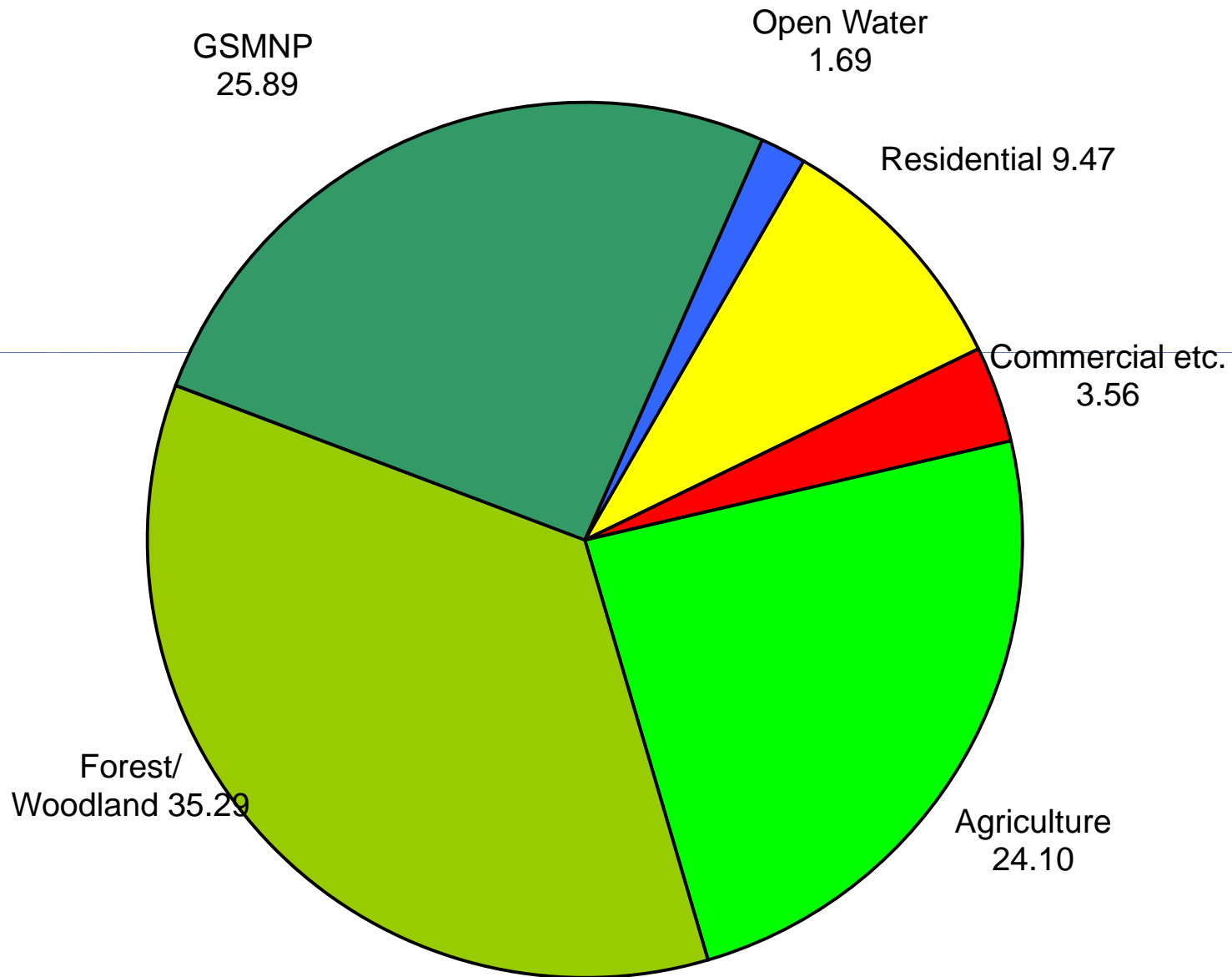
# Loss of Rural Land Indicators

Land use information

Only about 13 percent of the land area of the county is developed into commercial and residential use, with the remainder classifiable as rural, including the Great Smoky Mountains National Park

However, many see the scattering of suburban types of residential and commercial development as destructive of the rural character of the county

# Blount County Land Use Percent of Area (IPSI Data 2000)



# Loss of Rural Land Standards

Less loss of rural land – likely to occur if sprawl standard is met

Program to preserve rural land would address issue directly

Track subdivision approvals and building permits

Track rural acres directly preserved

# Roads and Traffic

Supported by existing research (AASHTO – American Association of State Highway and Transportation Officials)

An inadequate or unsafe road with growing traffic can lead to both automobile and pedestrian accidents resulting in injury and death

Much growth in the county spreads onto rural roads that are inadequate for new urban and suburban development

# Roads and Traffic Indicators

Blount County Roadway Needs Study, (2000 and 2005 reports) provides a list of deficient major roads under County maintenance

Estimated about 50 percent of minor roads do not meet minimum standard of 18 feet of pavement with two foot shoulders – reference official roads list of County Highway Department

# Roads and Traffic- Standards

Engineering standards in A Policy on Geometric Design of Highways and Streets by the American Association of State Highway and Transportation Officials (AASHTO).

Minimum 18 feet of pavement with 2 foot shoulders – Blount County Planning Commission

Greater width and shoulders for major roads in proportion to traffic as identified in the Blount County Roadway Needs Study (2000 and 2005).

# Air Quality

Increased use of automobiles and other vehicles and machinery related to growth and sprawl

Linked to air pollution

Air pollution – ozone, carbon monoxide, particulate matter - linked to respiratory health problems and heart disease

Air Quality Subgroup to address indicators and standards

# Water Quality

Most development on private septic tank and leach field

Failing septic systems can lead to exposure to disease causing pathogens

About 250 septic systems fail each year

Water Quality Subgroup to address indicators and standards

# Commercial & Industrial Uses

Separation from residential use part of sprawl pattern

They are intensive land uses – can have external effects on nearby residential uses – stress factors

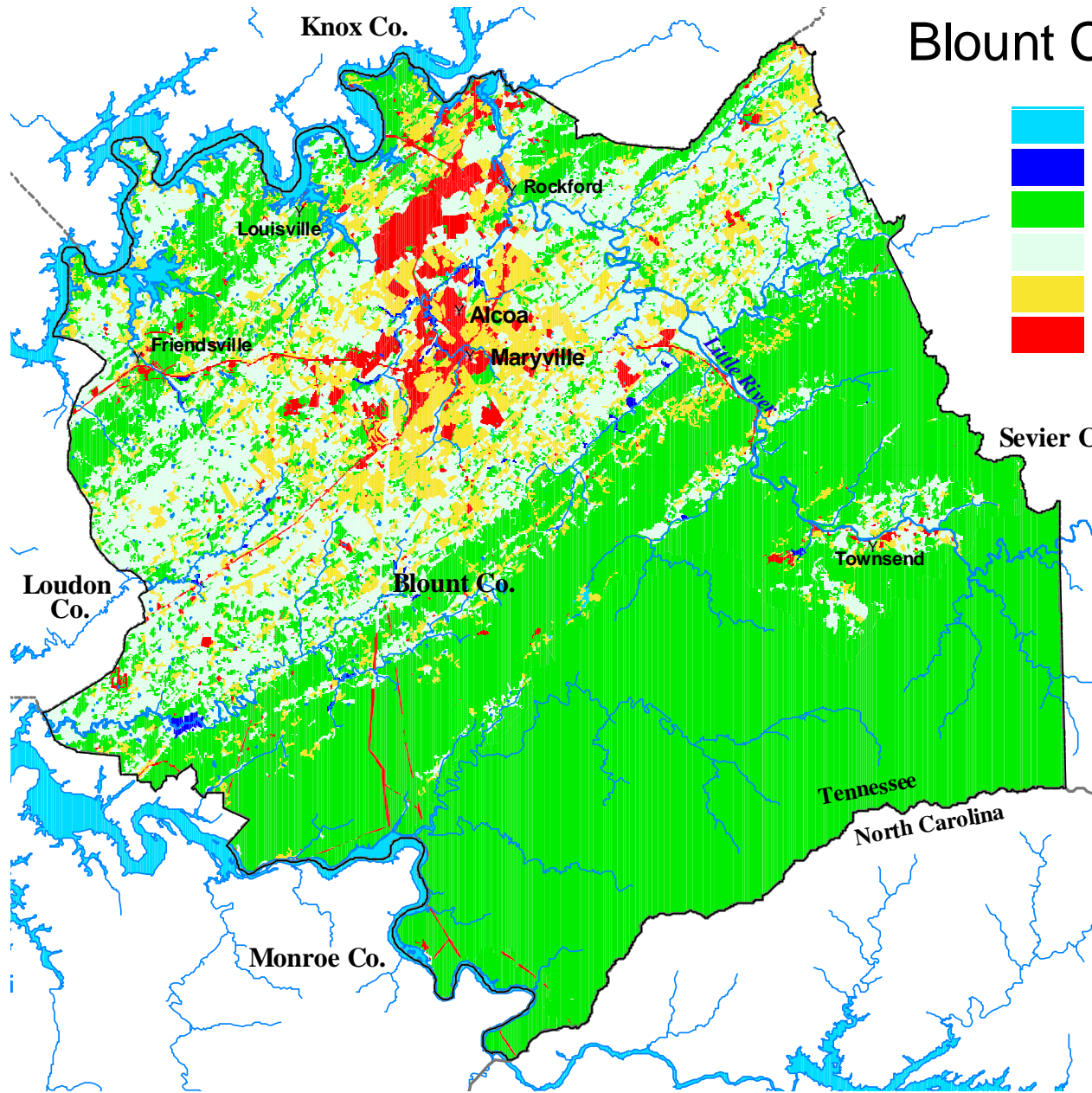
Industrial uses can lead to exposure to hazardous chemicals

# Commercial & Industrial Uses Indicators

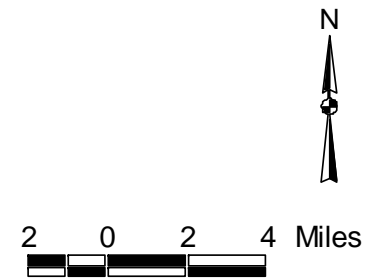
Map of land use pattern indicates that sprawl in the county has separated commercial/industrial from residential use

Very little commercial use is conveniently accessible to pedestrians or bicyclists who might originate in the residential areas

# Blount County Landuse



- Water
- Wetland
- Forested
- Agriculture
- Residential
- Commercial / Industrial



# Comm. & Ind. Uses - Standards

Regarding sprawl, cluster commercial and industrial use in the cities where urban services are present – along with urban clustering of residential use.

Regarding community design, greater pedestrian/bicycle access to neighborhood commercial uses, implying mixed use.

Regarding external impacts, regulation to reduce the impact of commercial/industrial uses on neighboring residential uses

# Development Design

Preference for cluster (village) design with green or open space

Integration of sidewalks and trails for exercise (walking and biking)

Better design of developments can at least provide the opportunity for a more active and healthy lifestyle, and can provide opportunities for relieving the stresses of urban and suburban living

# Development Design Indicators

Comprehensive Parks and Recreation  
Master Plan (2005)

County/city regulations that allow cluster  
development and open space preservation

Casual observation that such design is  
usually not systematically included in new  
developments, nor integrated into overall  
community plans

# Development Design Standards

Cluster Development, Traditional  
Neighborhood Development and New  
Urbanism design models

Direct requirement of open space set-  
asides and pedestrian/bicycle  
improvements in new developments

Integration with a plan for community  
wide open space and recreation

# Tree Preservation

Some possible long term links to health from global warming – fewer trees leads to reduced carbon dioxide sequestration

Immediate links to heat island effects of impervious surfaces – trees can provide shade to cool surfaces and mitigate ozone formation

# Tree Preservation Indicators

Land use information shows about 60 percent of county still in forest cover

Specific indicators for developed and developing areas not available

# Tree Preservation- Standards

No net loss of trees in conversion of land to urban and suburban development

Tree replacement regulations (City of Alcoa model)

More tree cover in impervious areas

Reforestation after harvesting

Tree City USA Program – tree board; tree care ordinance; community forestry program; and arbor day observance and proclamation

Full Report at  
[www.blounttn.org/planning](http://www.blounttn.org/planning)

Contact - John Lamb at  
[planning@blounttn.org](mailto:planning@blounttn.org)

# Next Steps

Formulate action plans

Validate action plans in community

Present action plans to decision makers

Follow-up with implementation

Thank You

Questions?

Comments.