Planning Tools for Pittsboro

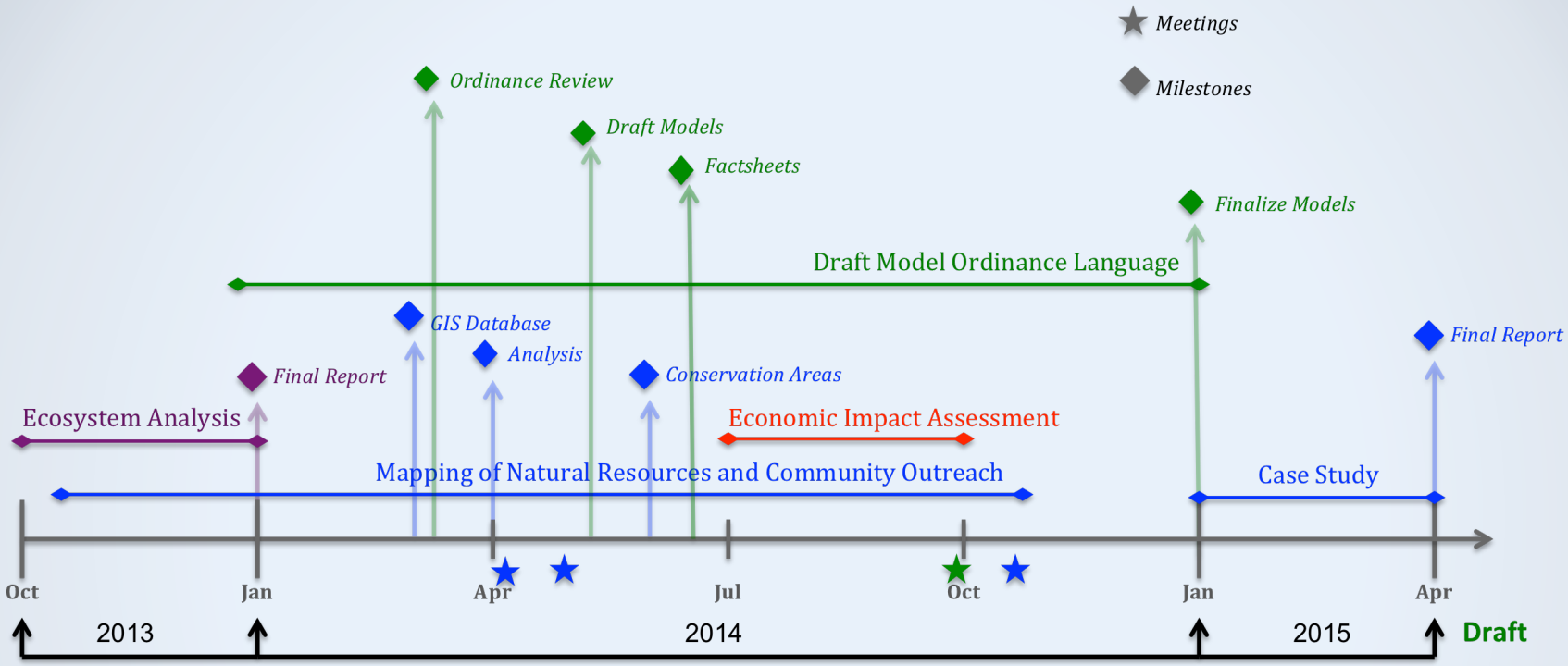
Forestry Redesign Grant for Natural Resources Protection in Pittsboro

Presentation to Pittsboro's Board of Commissioners
March 10, 2014

Project Goal: Develop conservation planning tools tailored to protect Pittsboro's natural resources.

1. Ecosystem Analysis and Canopy Assessment
2. Mapping of Natural Resources and Community Outreach
3. Draft Model Ordinance Language
4. Economic Impact Assessment of Conservation Measures
5. Case Study

Planning Tools for Pittsboro Project Timeline and Milestones



Ecosystem Service Analysis (Global Ecosystem Center)

- Land Cover Change Analysis and Urban Tree Canopy Assessment

Mapping of Natural Resources and Community Outreach (Biocenosis)

- GIS database of conservation layers
- Public Meetings (Apr 17th, May 8th and ~Oct)
- Biodiversity/Wildlife Habitat Analysis
- Identify priority Conservation Areas

Model Ordinance Language (Nicholas Institute at Duke)

- Review Existing Town Ordinances
- Draft Model Ordinance Language for Tree Canopy Protection and Green Infrastructure
- Supporting Factsheets
- Meet with Partners and Local Government (~ Oct)
- Finalize Ordinance Language

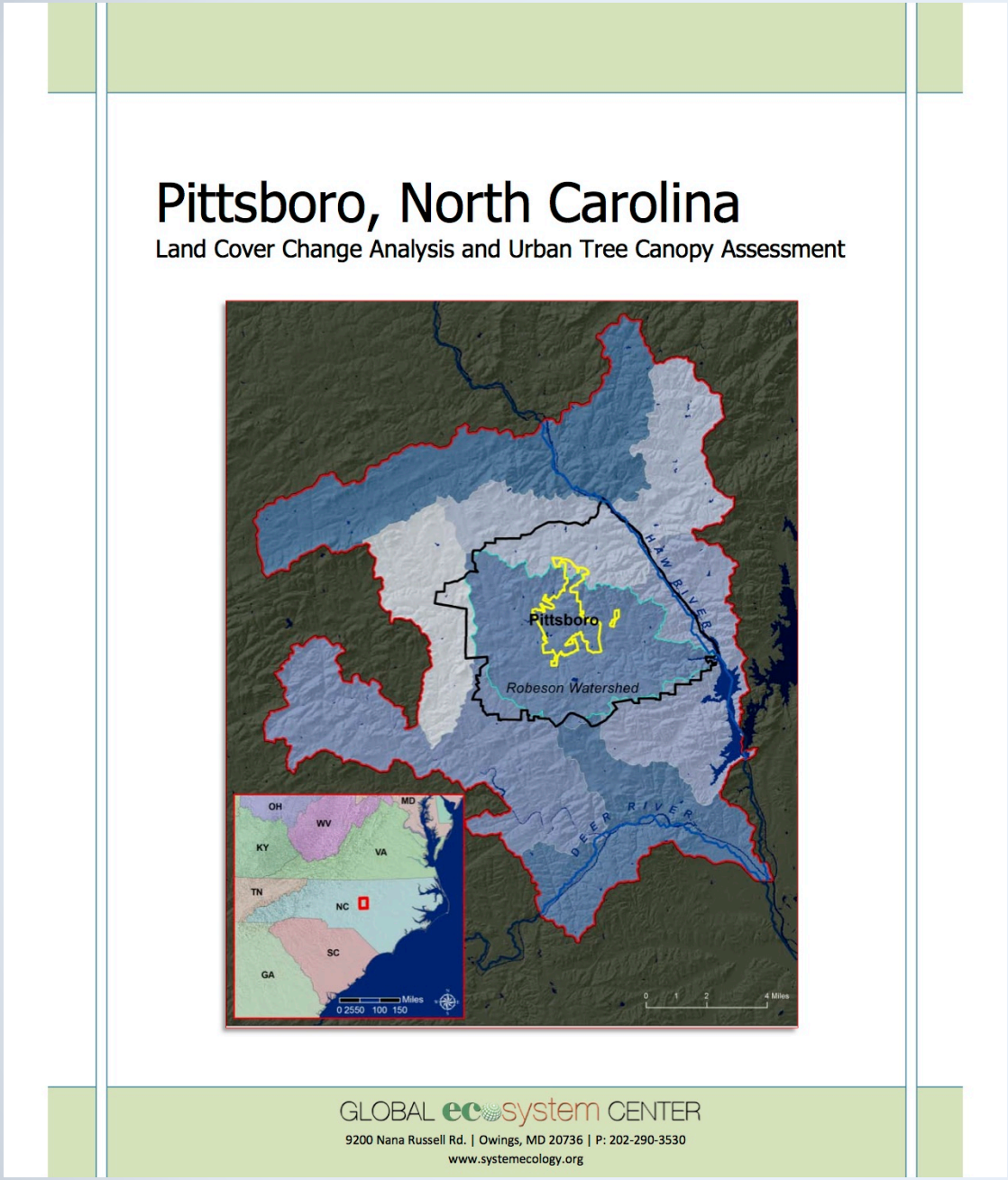
Economic Impact Assessment

Case Study (Biocenosis and Project Partners)

- Final documentation of the process, as a case study

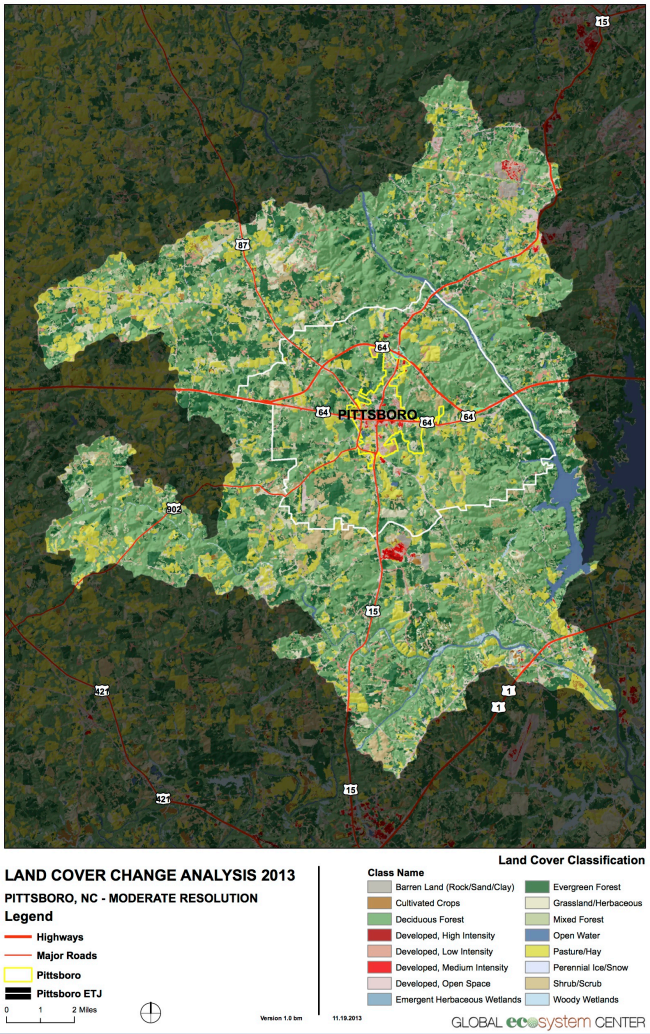
March 7, 2014

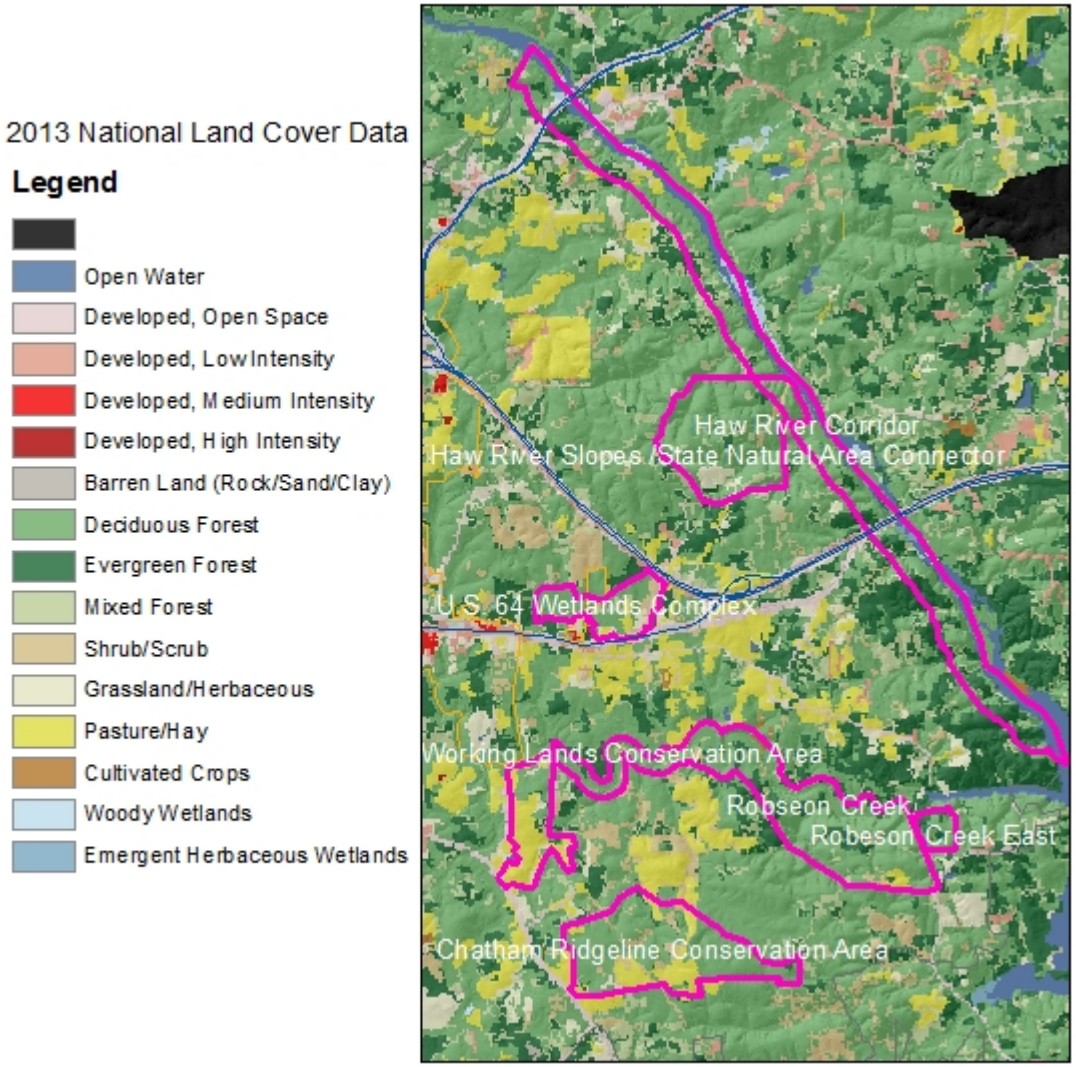
Land Cover Change Analysis and Urban Tree Assessment Report



- Land Cover Classification
  - Change analysis over past 28 years
  - Current baseline layer
- Canopy Assessment
- Ecosystem Service Analysis

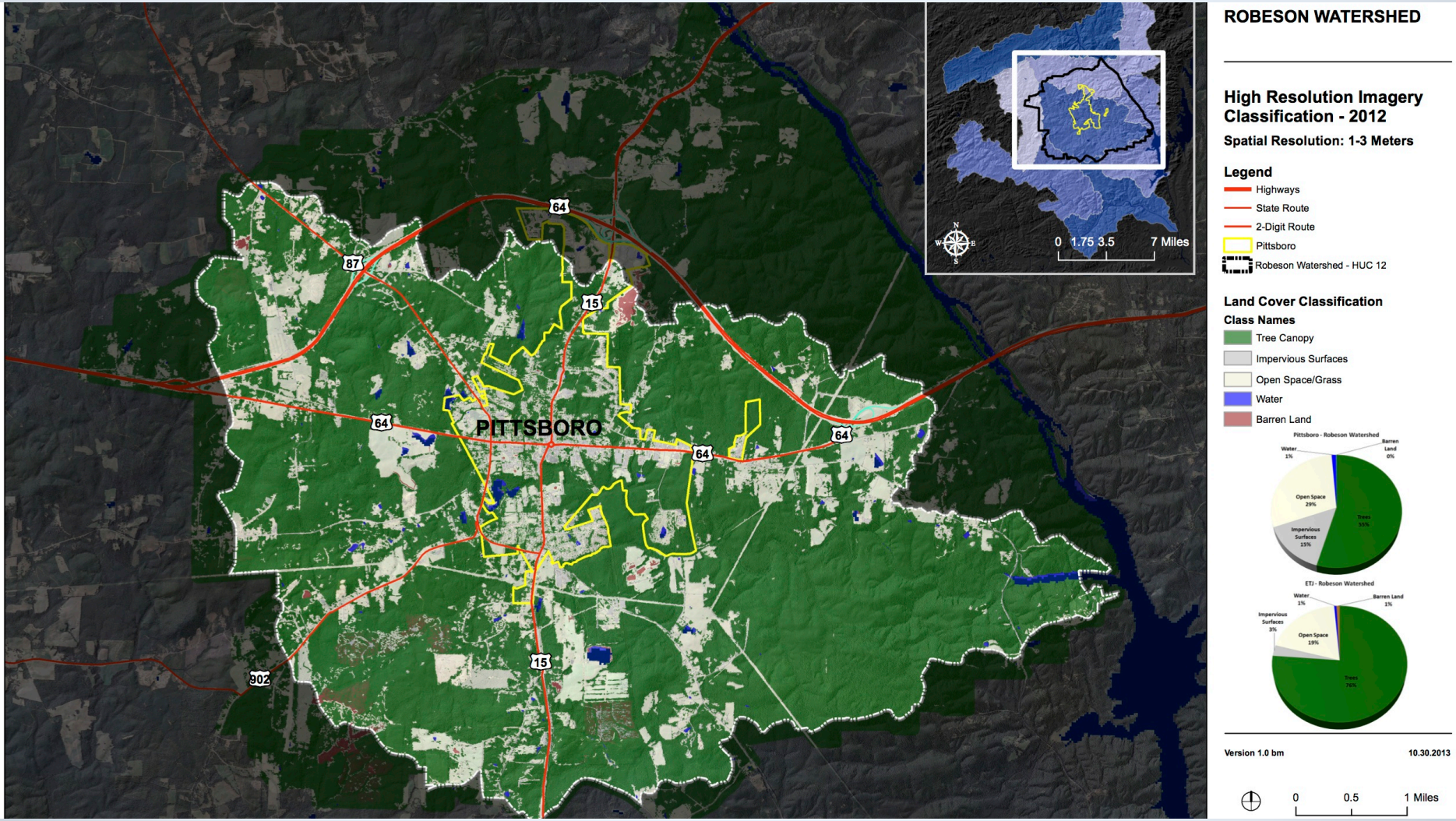
Land Cover Classification



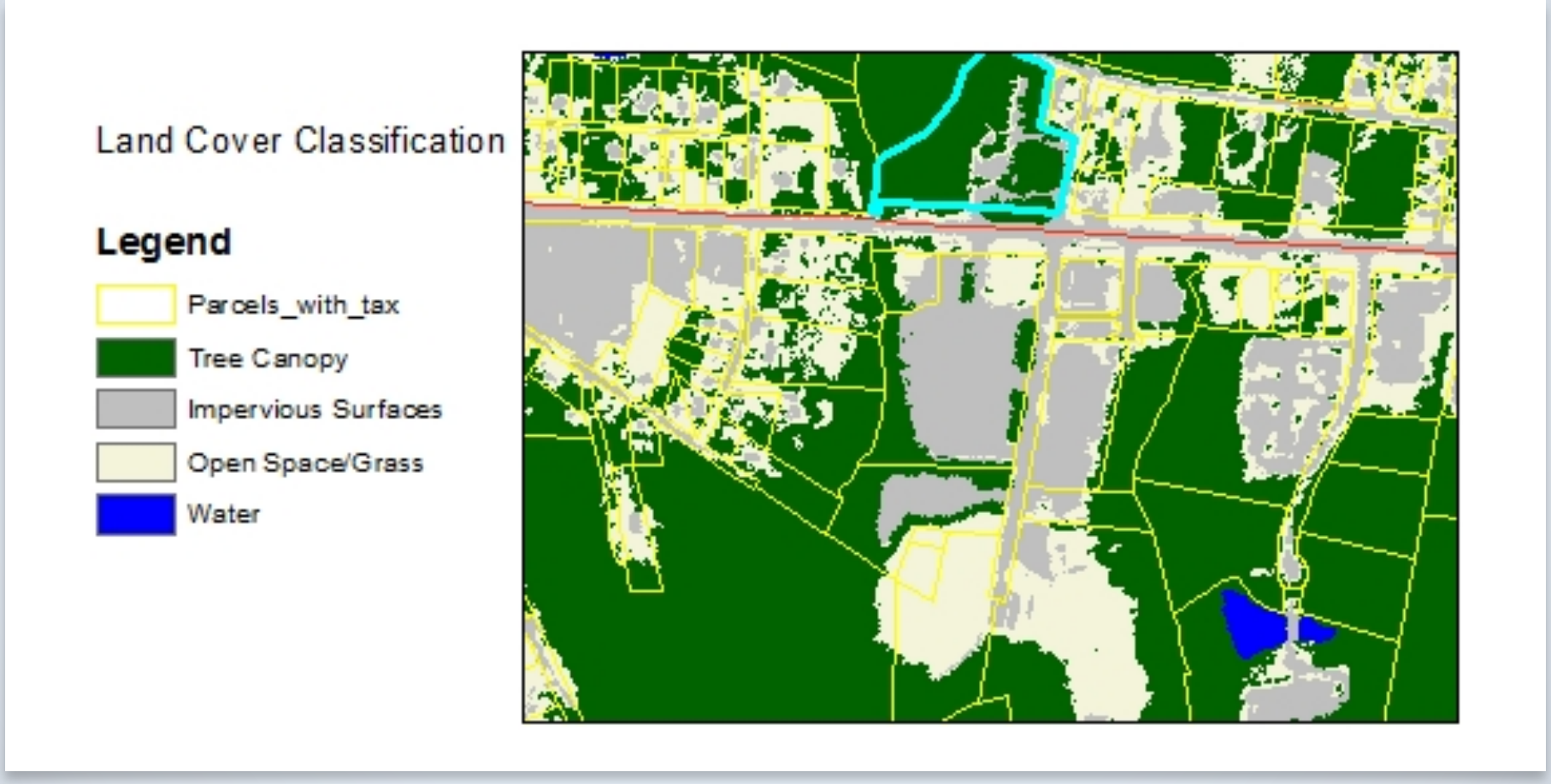


Southwest Shores Conservation Areas Highlighted

High Resolution Classification (1 to 3 m)



Town Hall Parcel Selected



1 meter spatial resolution within Town Limits

Pollution and Stormwater Reductions due to Tree Canopy

Pittsboro, North Carolina - Ecosystem Analysis									
Area of Study	**Total Area**	**Trees**	**Trees**	**Air Pollution Removal**	**Air Pollution Removal Value**	**Carbon Stored**	**Carbon Sequestered**	**Stormwater Saved❖**	**Stormwater Value @ $3 per ft^3**
	Acres	**Acres**	**%**	**lbs/yr**	**$**	**Tons**		**ft^3**	**$**
Pittsboro City Boundary (1m)	2,255	1,195	53 %	116,122	$322,456	51,428	400	10,966,611	$32,899,833
ETJ Boundary (3m)	25,284	19,725	78 %	1,916,568	$5,322,074	848,802	6,608	171,062,145	$513,186,435

Project resources housed at the
Chatham Conservation Partnership Wikisite:
http://chathamconservation.wikispaces.com/

April 17: Next CCP Meeting

May 8: RCWC Robeson Creek Report to the Community

Catherine Deininger
cdeininger@biocenosis.org
www.biocenosis.org

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Thank You!

Pittsboro, North Carolina: Ecosystem Analysis - Administration Boundary					
Zoning Name	**Total Area**	**Trees**	**Trees**	**Stormwater Saved❖**	**Stormwater Value @ $3 per ft³**
	Acres	**Acres**	**%**	**ft³**	**$**
Commercial	71	33	47.2%	272,476	$817,428
Industrial	458	318	69.4%	2,883,238	$8,649,714
Multi-Unit Plan Development (MUPD)	321	229	71.3%	2,080,756	$6,242,268
Office and Institution	24	18	73.9%	157,290	$471,870
Residential - Agriculture	4,852	3,608	74.4%	31,592,390	$94,777,170
Residential - Agriculture Max 2 Acres	14,128	10,945	77.5%	92,868,396	$278,605,188
Residential - Agriculture Max 5 Acres	5,008	4,285	85.6%	38,694,467	$116,083,401
Residential - High Density	34	25	74.4%	235,233	$705,699
Residential - Low Density	197	130	65.8%	1,165,446	$3,496,338
Residential - Medium Density	79	61	77.8%	576,090	$1,728,270
Residential - Medium Density (Mobile Homes)	82	60	73.1%	534,725	$1,604,175
Swouthwest Shores Conservation Hubs	2,852	2,515	88.2%	22,495,982	$67,487,946