

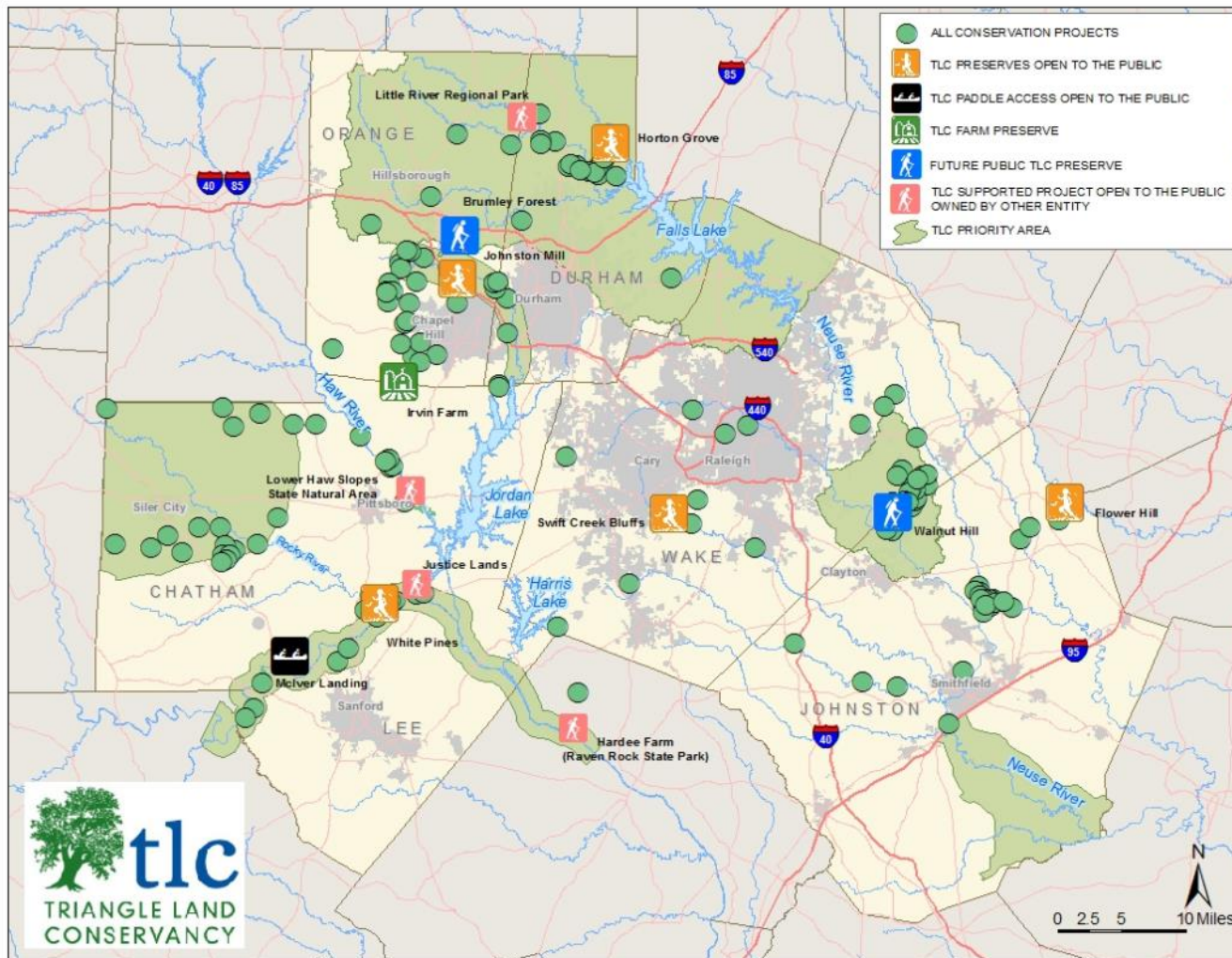
Photo: Gary Simpson



# Jordan Lake One Water Association and Conservation Strategy Analysis



# Mission Statement



TLC strives to create a healthier and more vibrant Triangle region by safeguarding clean water, protecting natural habitat, supporting local farms and food, and connecting people with nature through land protection and stewardship, catalyzing community action, and collaboration.

# Safeguarding Clean Water

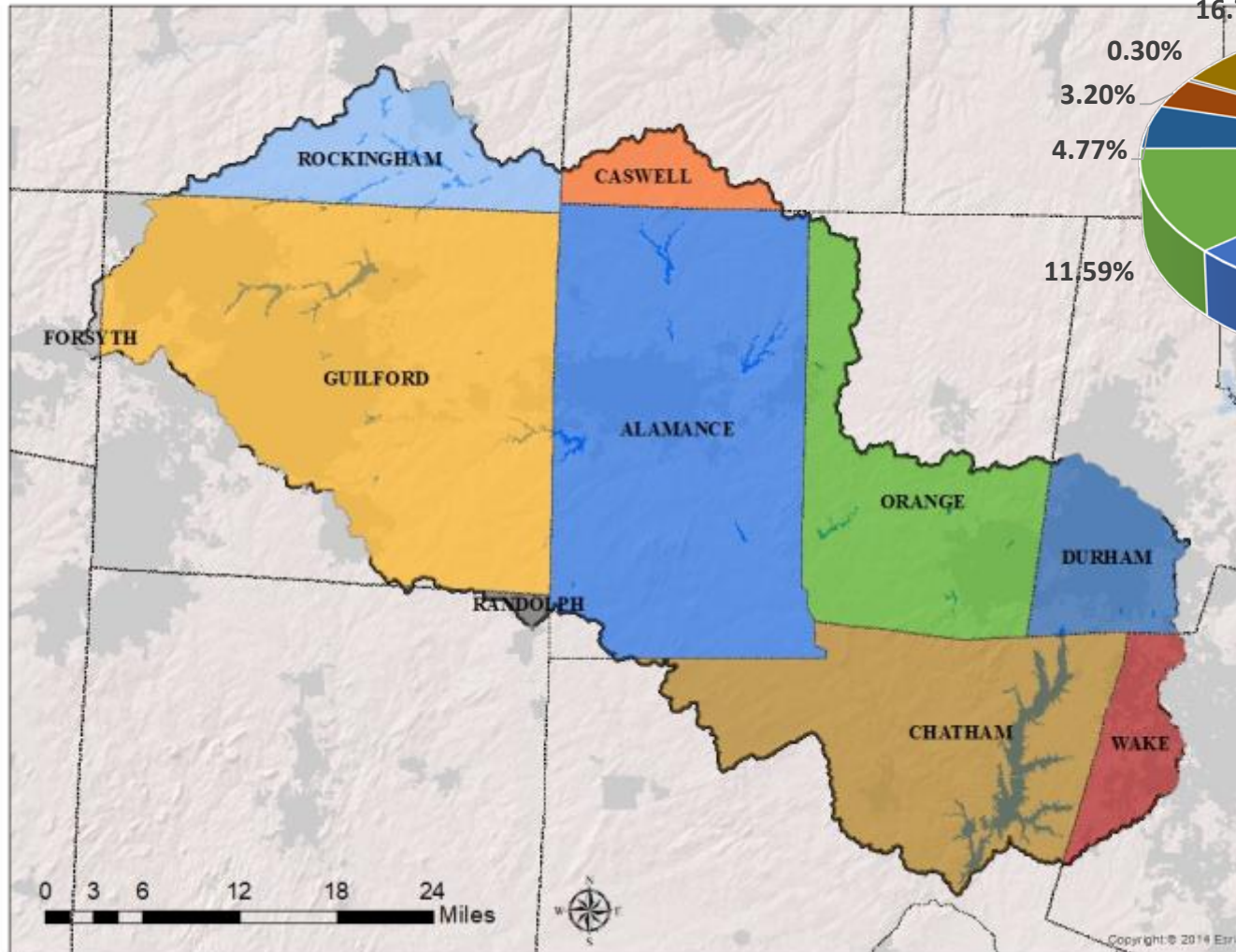


**Outcome: Priority lands  
in watersheds  
identified &  
permanently protected.  
Results:**

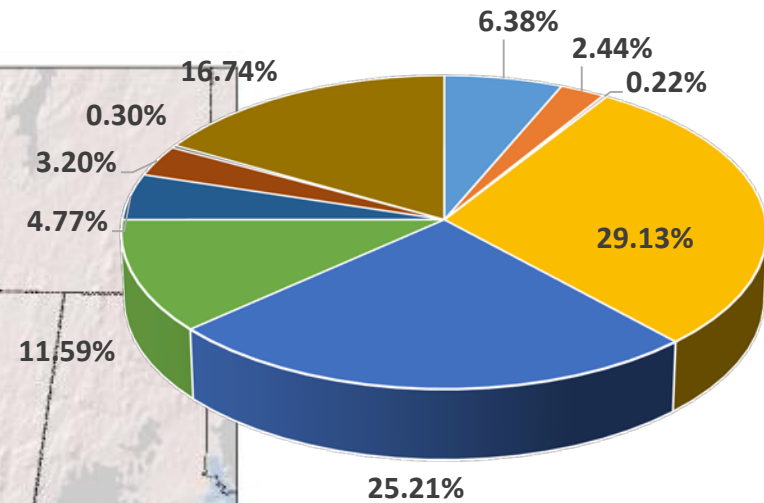
- An additional 5,000 acres of land in the Neuse River basin is protected in collaboration with cities of Raleigh, Durham, Wake County and nonprofit partners.
- An additional 2,000 acres of land is protected in Cape Fear basin with government, nonprofit and other partners.



# The Upper Cape Fear



Percent of Watershed



- 5560 square miles
- 10 counties
- 1,085,803 people (2015)
- 27 municipalities
- 24 public drinking water systems
- 11 water supply reservoirs
- 683,798 customers (2016)

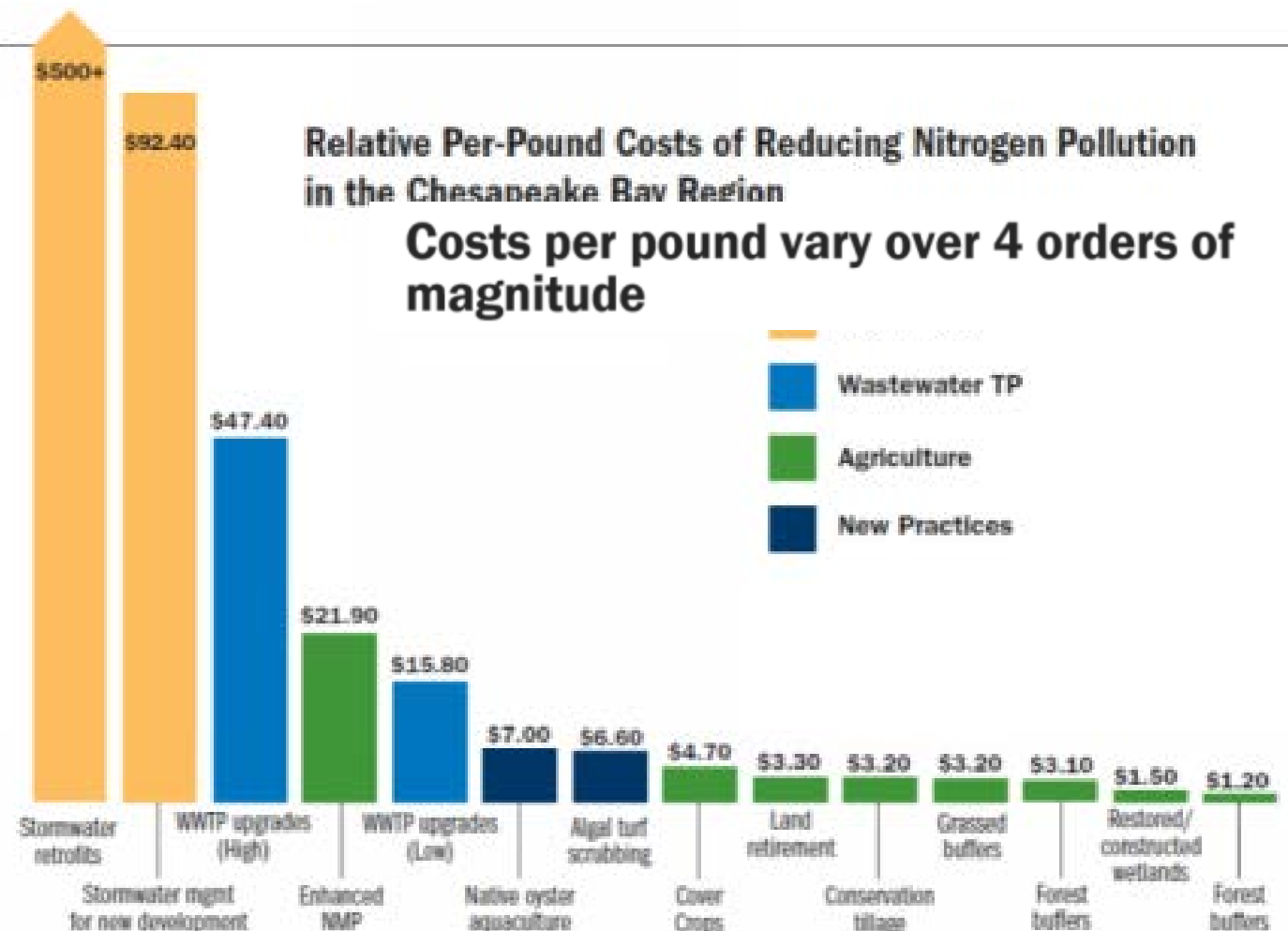


## Upper Cape Fear Watershed



Developing a Conservation Strategy  
to Protect and Provide Clean Water

# Costs per pound vary over 4 orders of magnitude



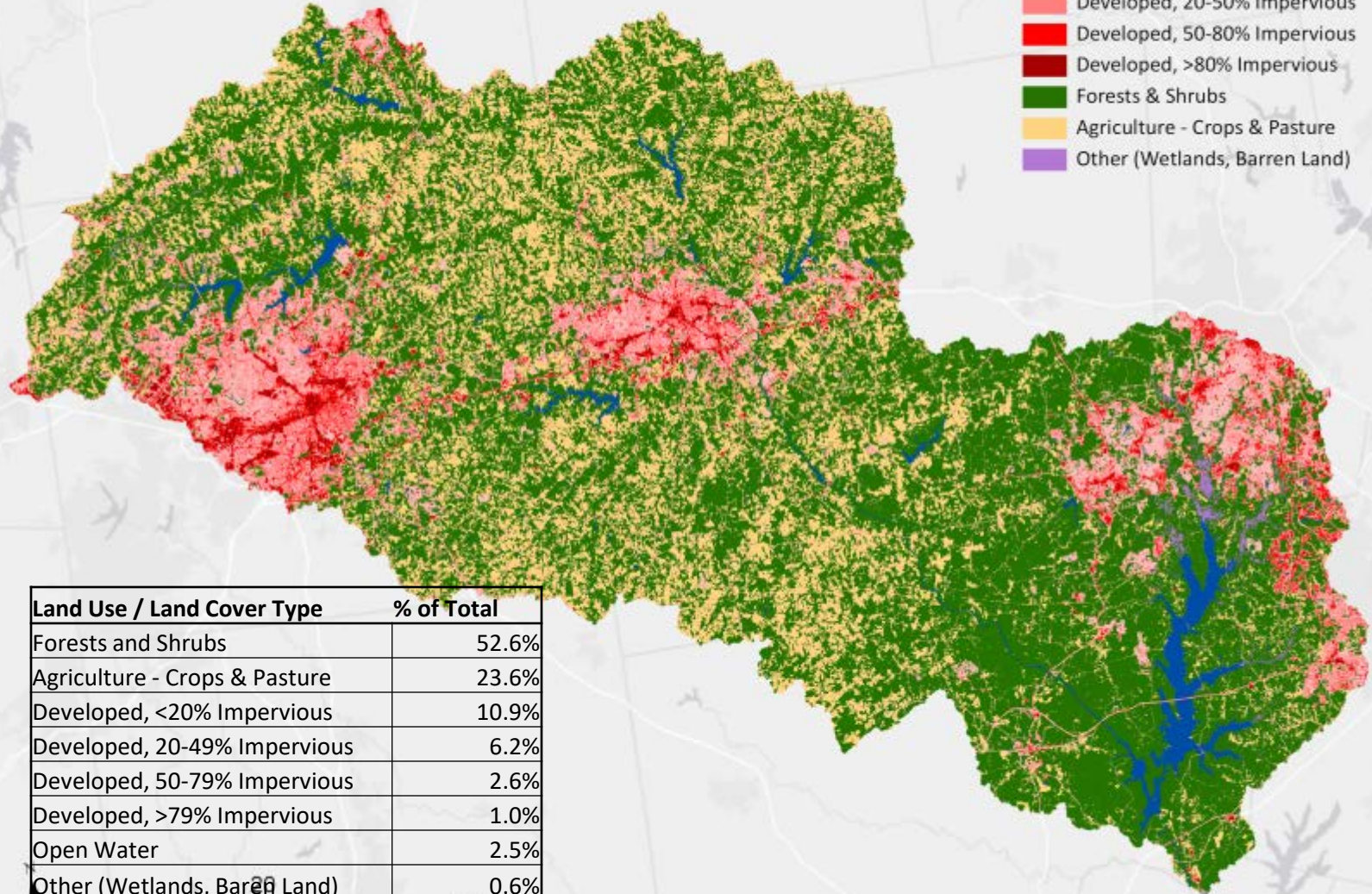
Source: World Resources Institute

January 2010

# Land Use Breakdown in the Jordan Lake Watershed

## Land Use / Land Cover Type

- Open Water
- Developed, <20% Impervious
- Developed, 20-50% Impervious
- Developed, 50-80% Impervious
- Developed, >80% Impervious
- Forests & Shrubs
- Agriculture - Crops & Pasture
- Other (Wetlands, Barren Land)



Land Use / Land Cover Type	% of Total
Forests and Shrubs	52.6%
Agriculture - Crops & Pasture	23.6%
Developed, <20% Impervious	10.9%
Developed, 20-49% Impervious	6.2%
Developed, 50-79% Impervious	2.6%
Developed, >79% Impervious	1.0%
Open Water	2.5%
Other (Wetlands, Barren Land)	0.6%

Miles

# Conservation Planning

## Water Sources and Conveyances

- Protect Headwater Streams
- Support connected high quality water features
- Protect stream bank buffers

## Uplands

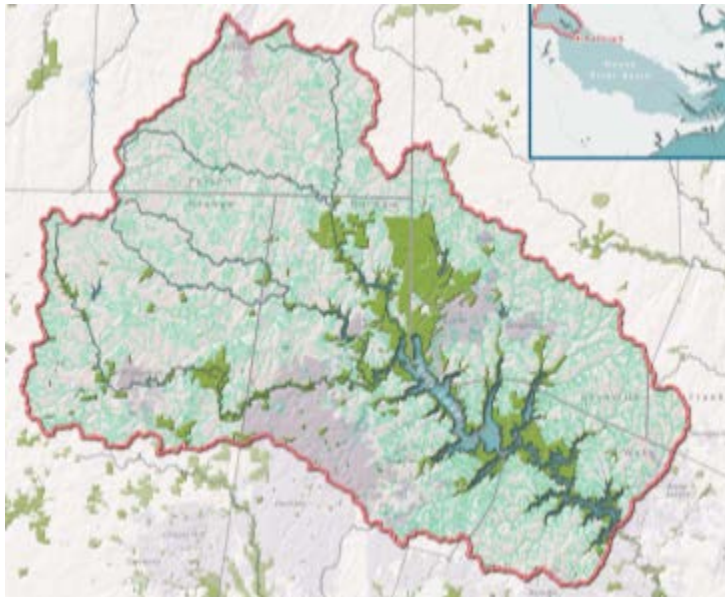
- Protect uplands and pervious areas
- Protect areas with minimal impervious surface
- Protect uplands with forest cover

## Infiltration and Retention

- Promote infiltration and retention through wetland protection
- Promote filtration through floodplain protection
- Protect groundwater recharge areas

## Vulnerable Areas

- Protect wet/hydric areas
- Protect steep slopes
- Protect highly erodible soils



# Water Quality Impacts

Properties conserved	<b>110</b>
Acres protected	<b>10,213</b>
Leverage Ratio	<b>11:1</b>
Value of Property Protected	<b>\$82 M</b>
Value Donated by Landowners	<b>\$23 M</b>
City of Raleigh Investment	<b>\$7.6 M</b>

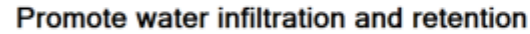
**101**  
Miles of  
stream

**110**  
Properties

**10,213**  
Acres of  
land

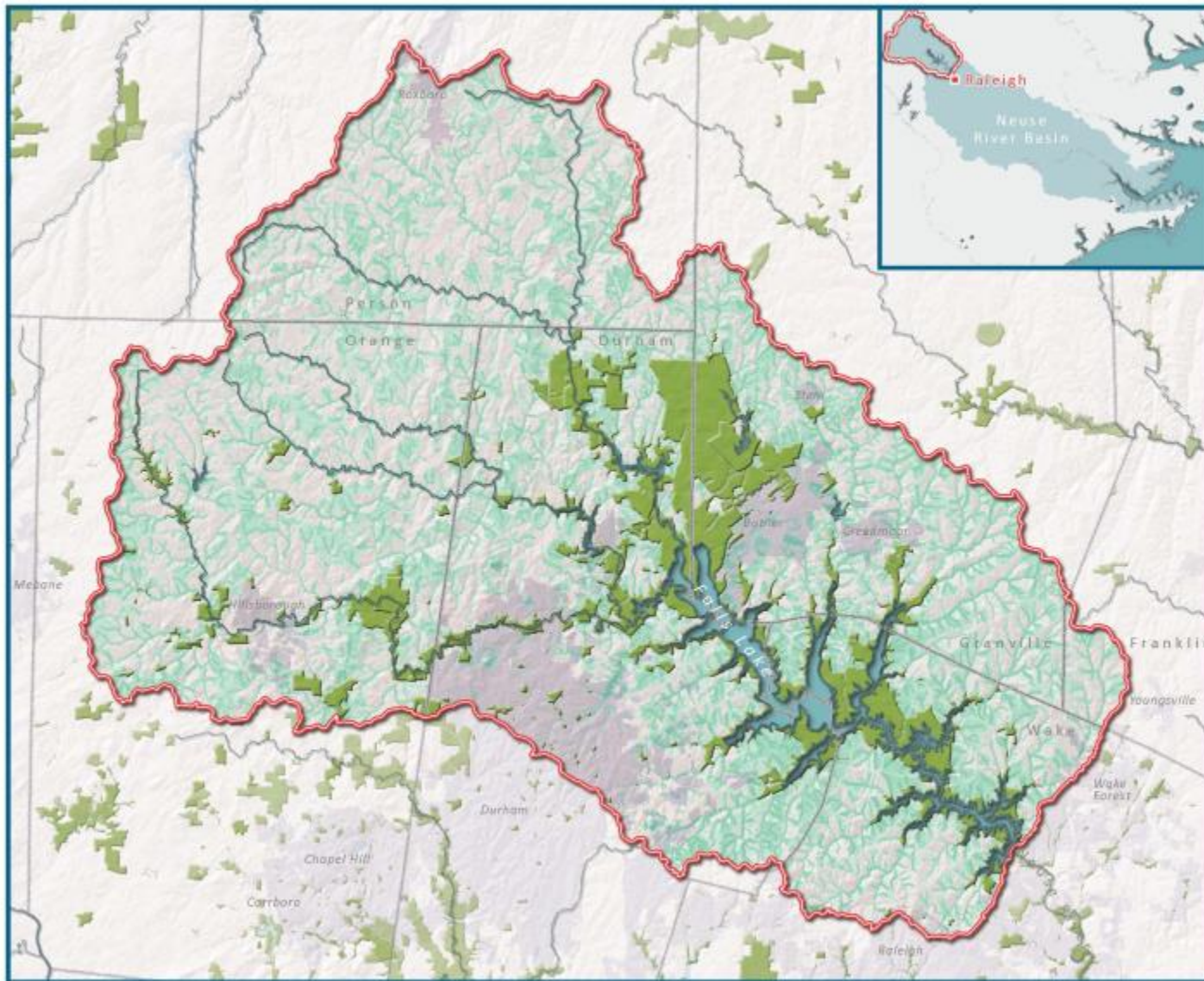


## Protect water sources and conveyances



### Delete waterbody areas

### Extract scores to each parcel



THE  
CONSERVATION FUND



TAR RIVER  
LAND CONSERVANCY

FIGURE 1.2: Land Conservation Strategy Map

## UPPER NEUSE CLEAN WATER INITIATIVE: CONSERVATION STRATEGY

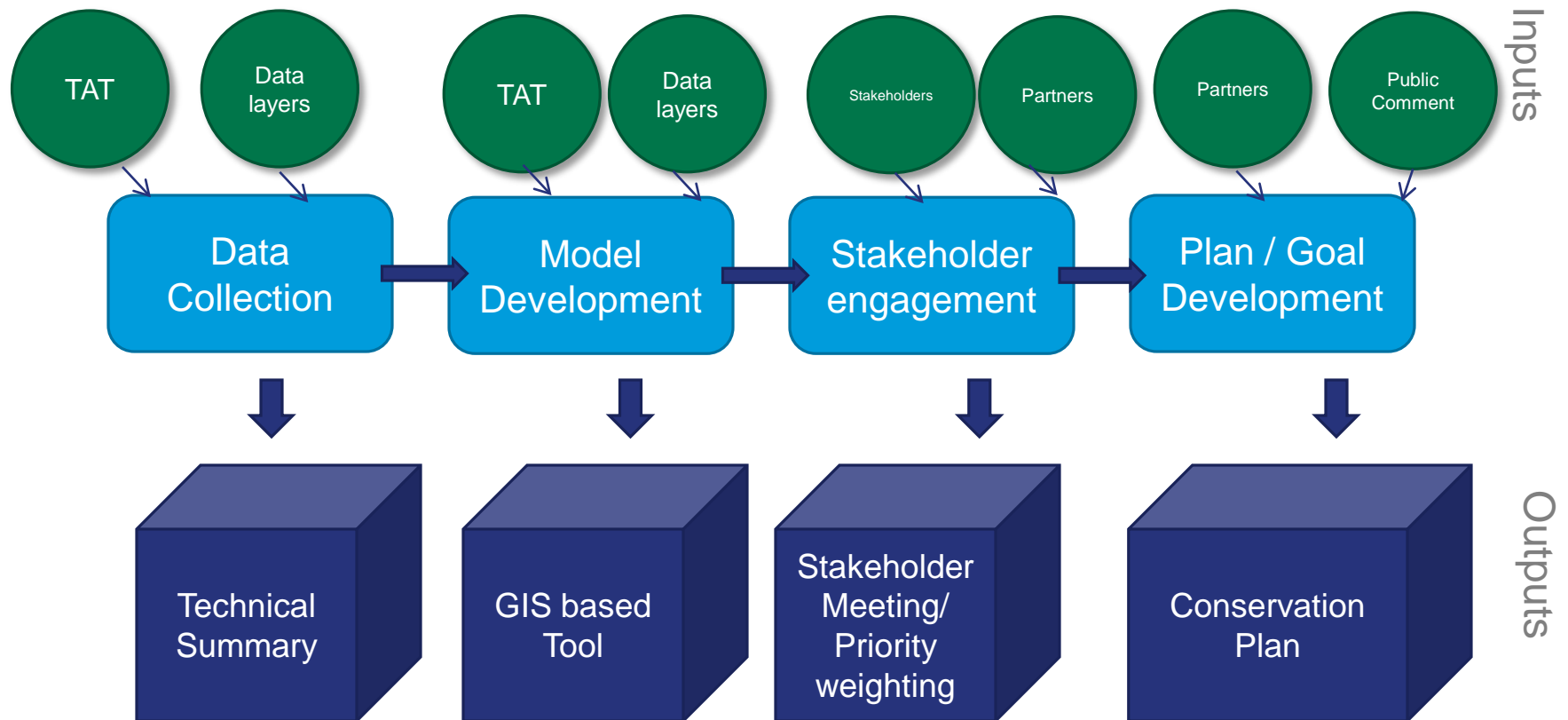
### 2015 MODEL RESULTS

- 770 square miles
- 6 counties
- 8 municipalities
- 6 public drinking water systems
- 9 water supply reservoirs

**Priority parcels** = Score 4.2 (mean) or above, within 50' of waterbody

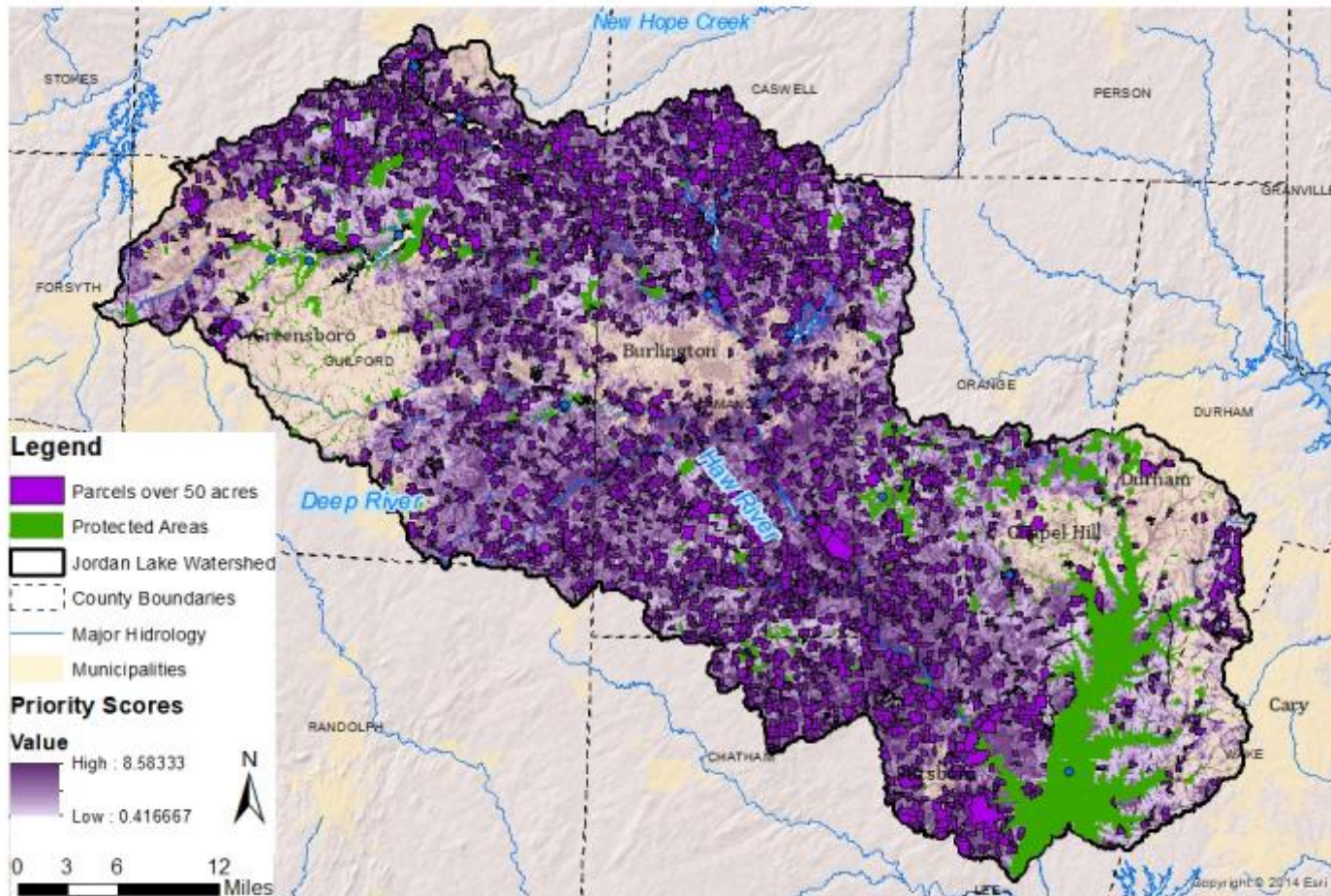
**Priority area** = 17,000 parcels (15% of total), 260,000 acres (56% of total)

# Process for Strategy



# Preliminary Results

## Parcels above Mean Score over 50 Acres in Upper Cape Fear Basin



- 2,844 parcels are 50 + acres
- 273,900 acres

# Draft Timeline

Sep/ Oct

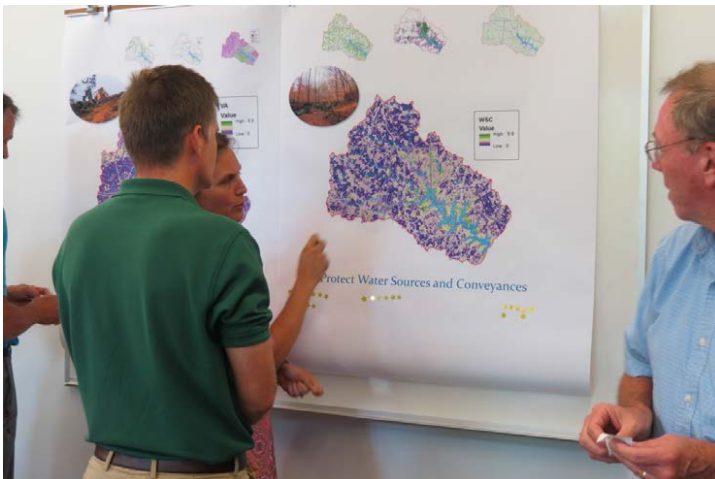
- Data updates and collection
- Model update and technical feedback

Nov/ Dec/ Jan

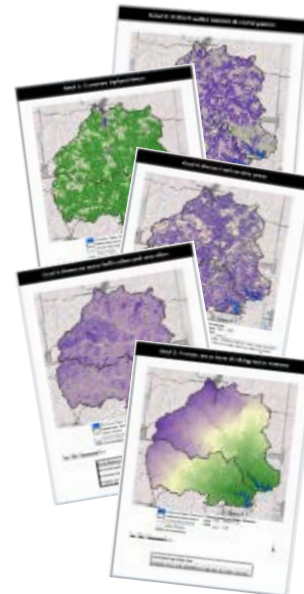
- Stakeholder weighting and input
- Model Feedback

Jan/ Feb

- Plan Outreach and review



x20



# Goals

- ▶ Work with Stakeholders to refine model and weights
- ▶ Draft Plan and set conservation goals
- ▶ Develop outreach and funding strategy
- ▶ Build momentum and leverage with additional partners



# Funding

- Haw River sub-basin potential revenue generation
  - \$0.15 per 1000 gallons, volumetric fee
  - **Generates ~\$3.06 million a year\***
- Water Users: 461,091 residential accounts  
39,407 non-residential accounts

**Watershed Protection Revenueshed Scenario Model: Generic** October 2013

Instructions **Water** Wastewater Stormwater Other

**Data Entry**

Current Base Charge (\$/month):    
 (Enter the base charge for the most common meter size)

Amount included in base charge (Kgal):    
 (If variable rates, enter the rate that applies to the average water use)

Current rate (\$/Kgal):    
 (If variable rates, enter the rate that applies to the average water use)

Average Use (Kgal/month):   
 Residential:    
 Non-Residential:

Number of Accounts:   
 Residential:    
 Non-Residential:

**Total Revenue Generated**

Percent Allocated: 0.0%

**Total Monthly Bill Increase**

Residential	Non-Residential
\$0.66	\$4.76

**Source of Dedicated Funding**

Water Wastewater Stormwater Property Tax Annual Cost Share

Watershed Protection Revenues Year 1:

\* This number is calculated using Capacity for Watershed Protection Investment tool development by Environmental Finance Center at UNC; major data sources are NC Local Water Supply Plans 2016 (2013 when data not available) and the most conservative estimates based on rate and fees of water use in town of Cary for fiscal year 2018.

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Questions?

