

# FUTURE LAND USE CHANGE: DEVELOPMENT, SEA LEVEL RISE, STORM SURGE IMPACTS



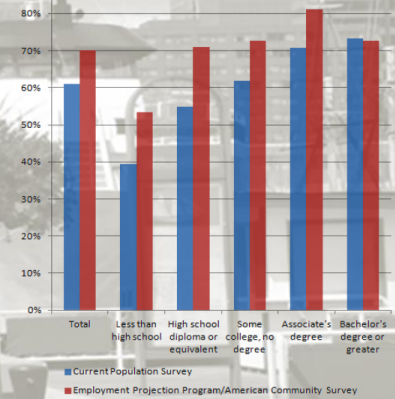
Impacts on Forest, Farmland,  
Estuarine Lands

# GROWTH SIMULATION MODEL: OVERVIEW

Policy: State & Local



Population & Employment Projections



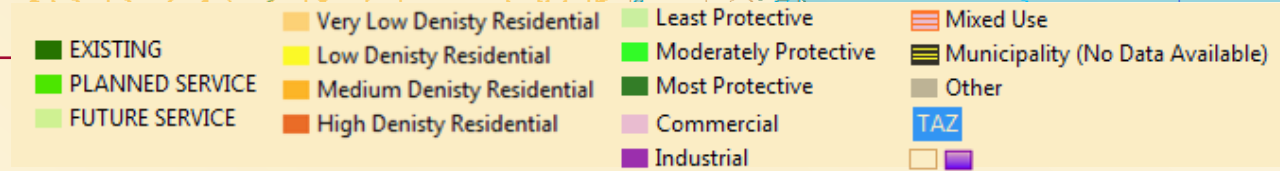
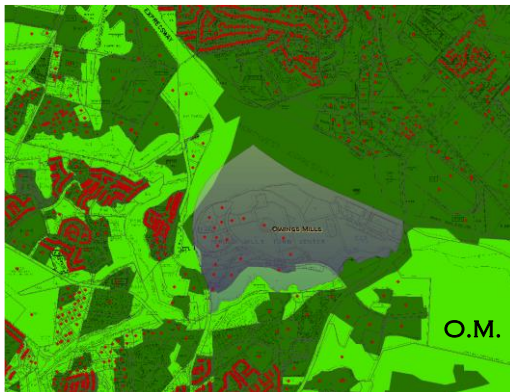
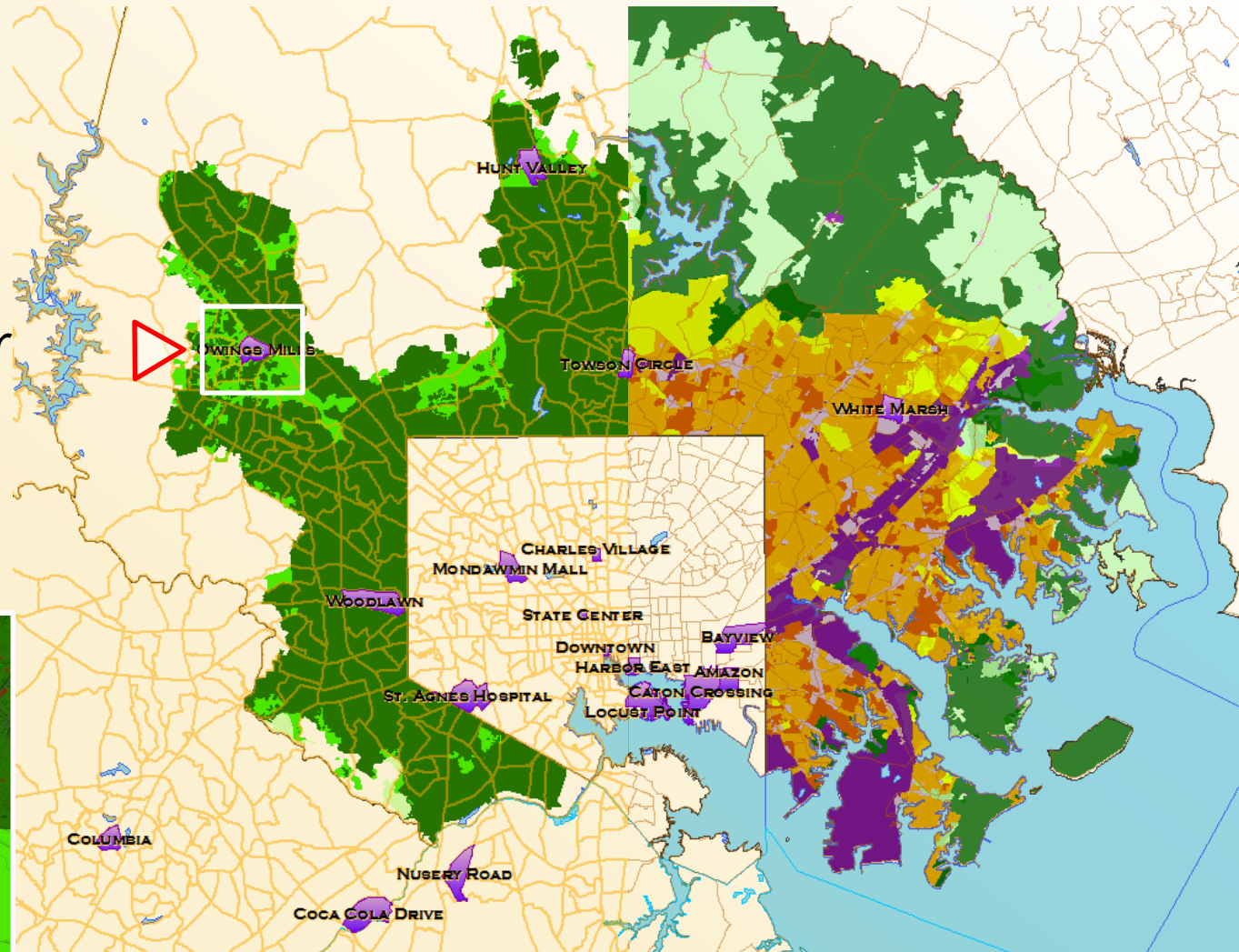
What's Desired, Where?

Magnitude How Much? Where?

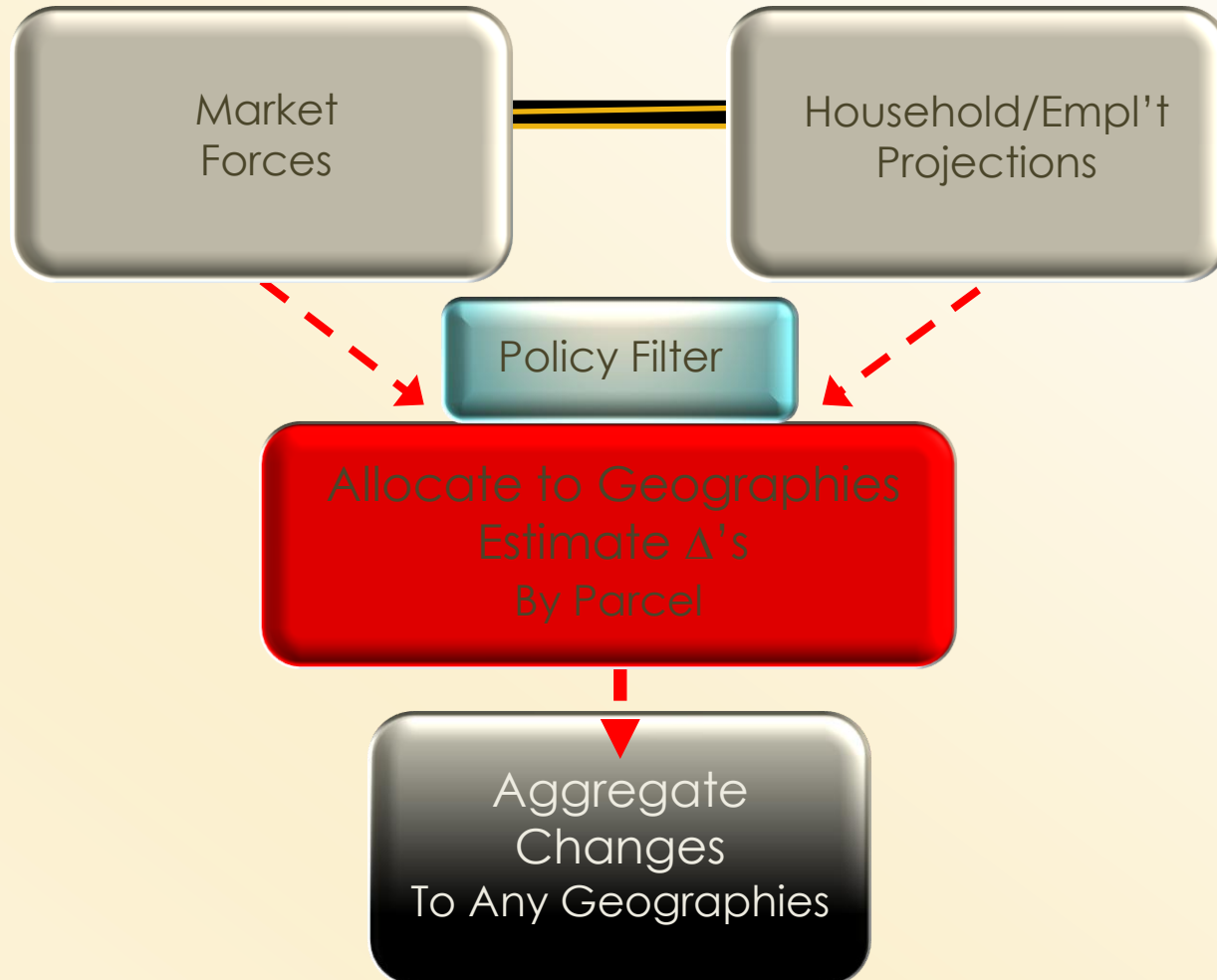


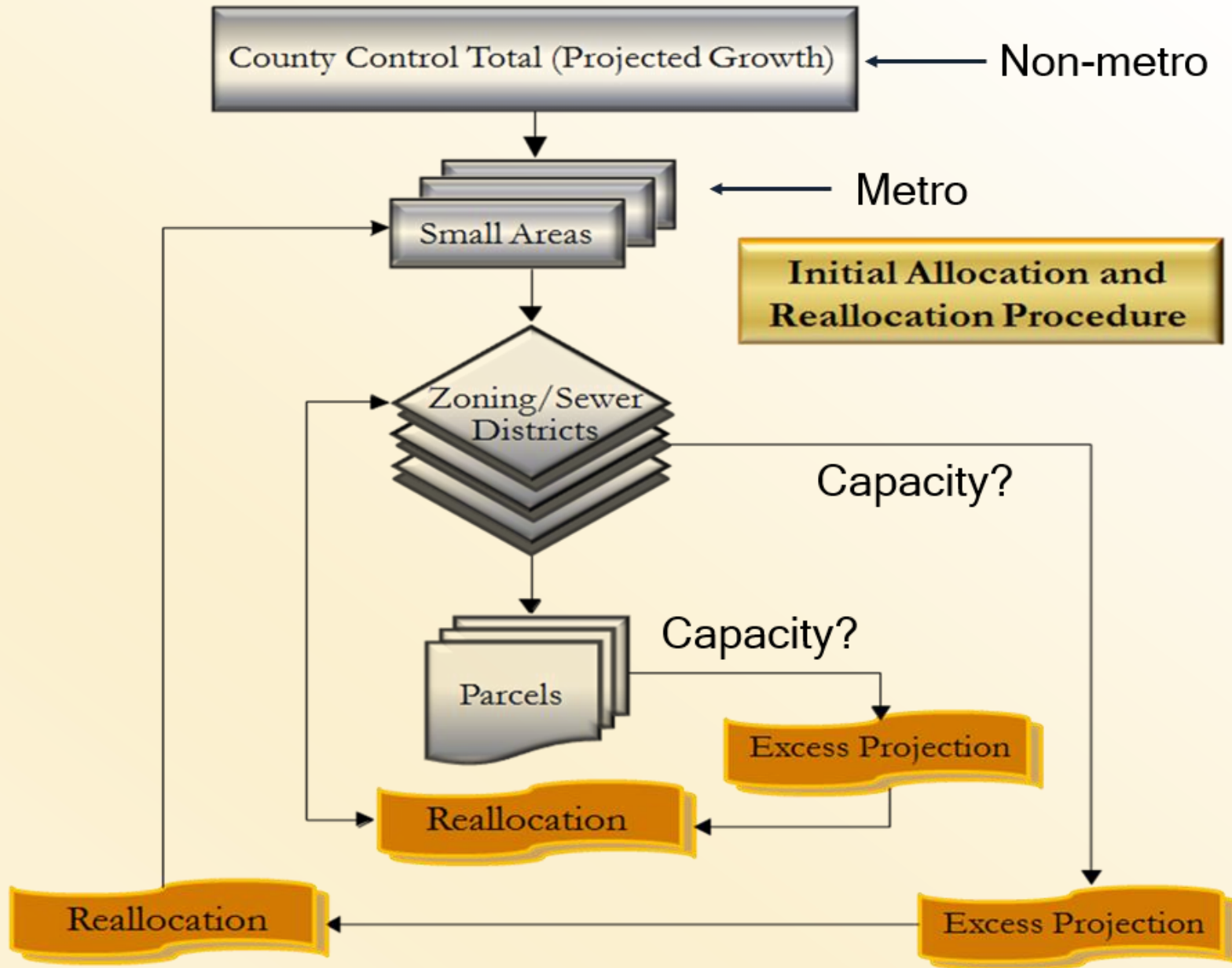
# NESTED MODEL GEOGRAPHIES

- Counties
- Small Areas
  - TAZs
  - Block Groups
- Zoning/Sewer Districts
- Parcels

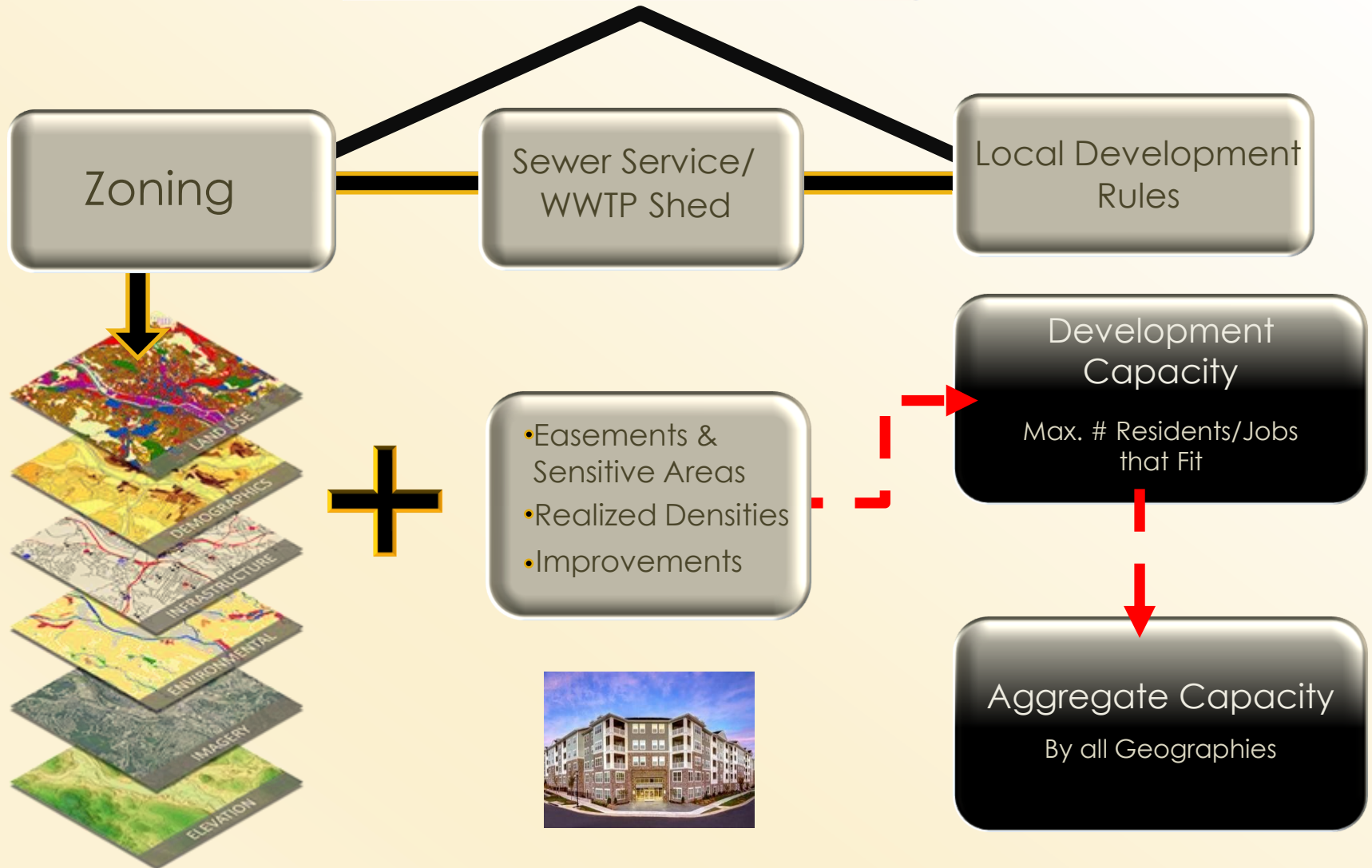


# Model Routines





# Development Capacities



# PARCEL ALLOCATION

Rank by proximity measures within Zoning/Sewer Districts:

- Existing Sewer service
- Major roads
- Residential developed land
- Commercial developed lands; and
- Transit stations

Rank by proximity score, development capacity

17 acre parcel  
5.25 du/acre allowable  
Density  
10.34 developable acres  
Capacity = 54  
Proximity Score = 6  
Allocation = 54  
New developed acres  
=10.34

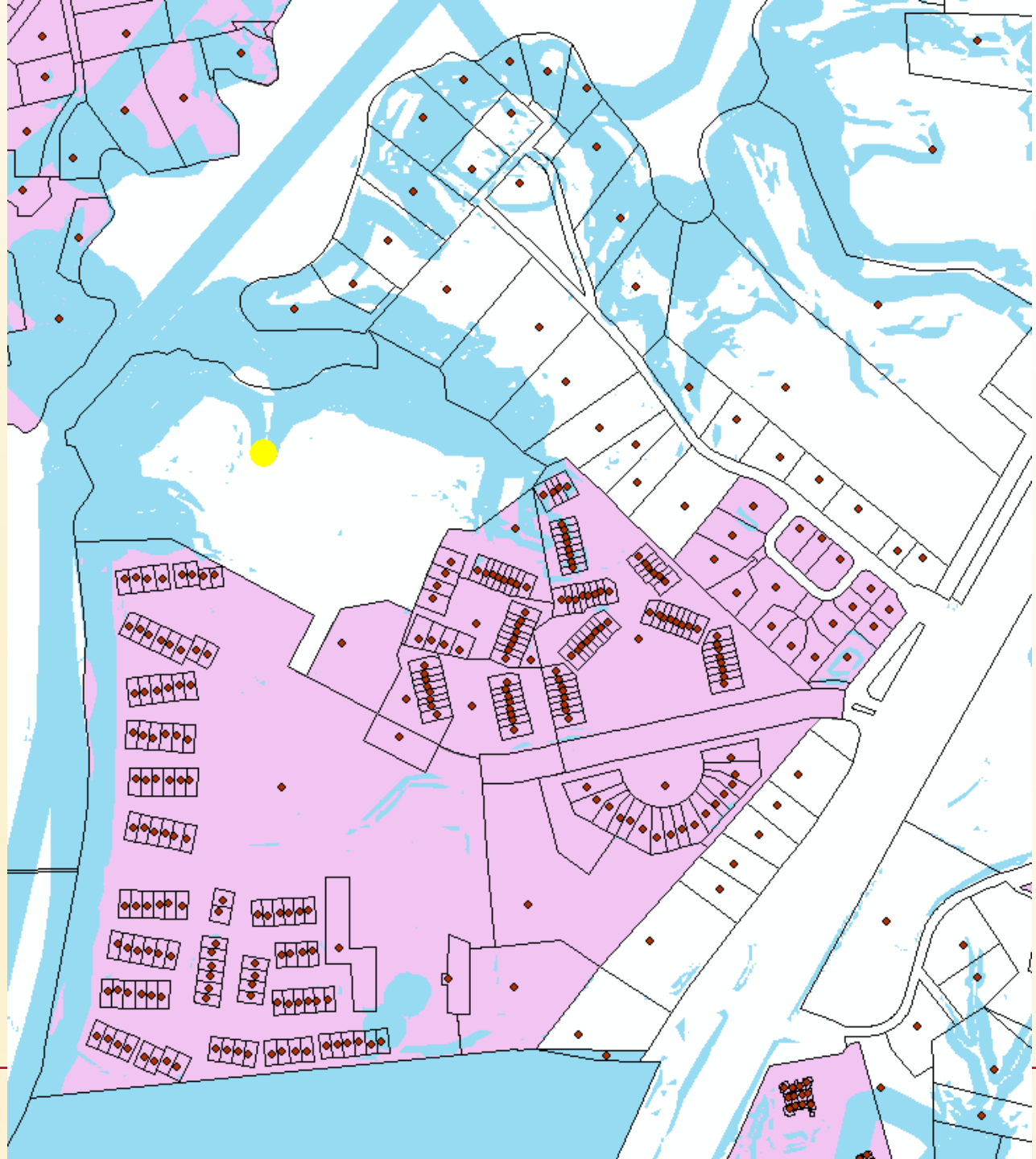
Identify

Identify from: <Top-most layer>

- CALVSEPTICCONSTRAINT
- ASBURY-SOLOMONS INC

Location: 1,464,869.142 249,034.614 Feet

Field	Value
MDE6NAME	PATUXENT RIVER
MDE8DIGT	02131101
MDE8NAME	Patuxent River lower
DNR 12DIG	021311010873
STRANAME	PATUXENT
PROT	
GENZONE	MEDIUM DENSITY RESIDENTIAL
OVERLAY	
ZONING	S-F1
ACRES_ORIG	16.7
DEV_ACRES	10.342302
WET_ACRES	14.990682
ACRES_POLY	18.384251
SEWSTAT	E
ALLOWDENS	5.25
NHC	54
NHA	54
DEVPROB	6
NEWDEVAC	10.2857
ZONEDLUCODE	12
RESULTLUCODE	12
RESULTDENS	5.25
NONRESCAP	0





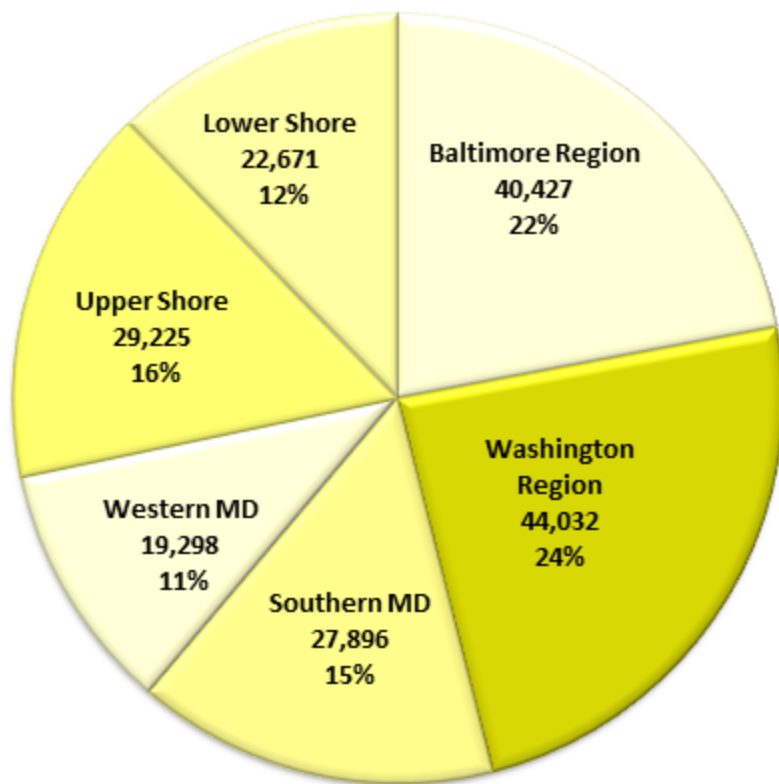
# Potential Loss of Agriculture and Forest Land, 2010-2040

## State of Maryland

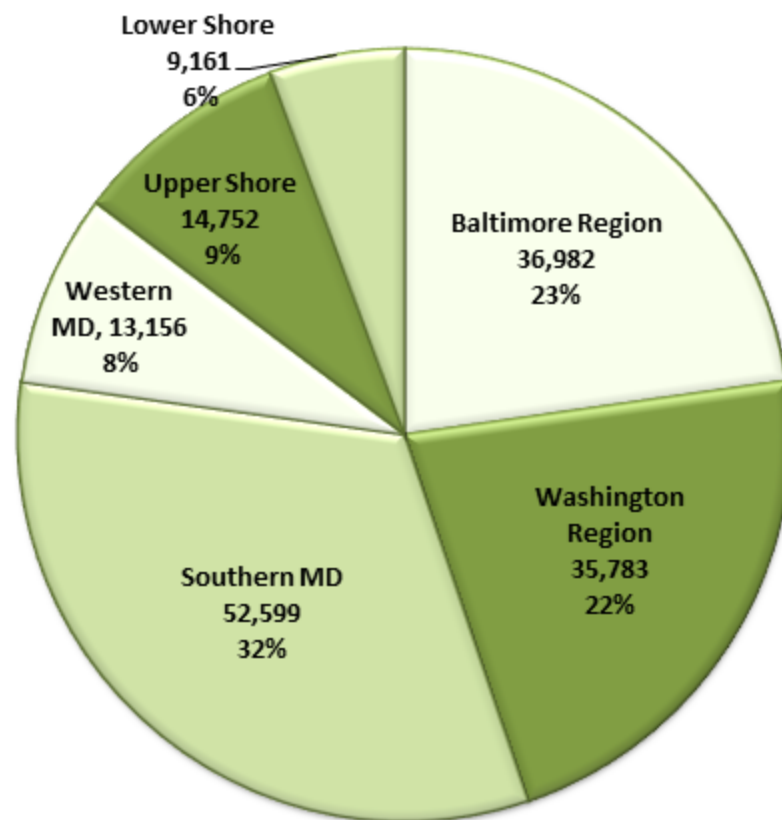
Figure 3.2-6

**Total Loss of Ag and Forest land: 345,981 acres**

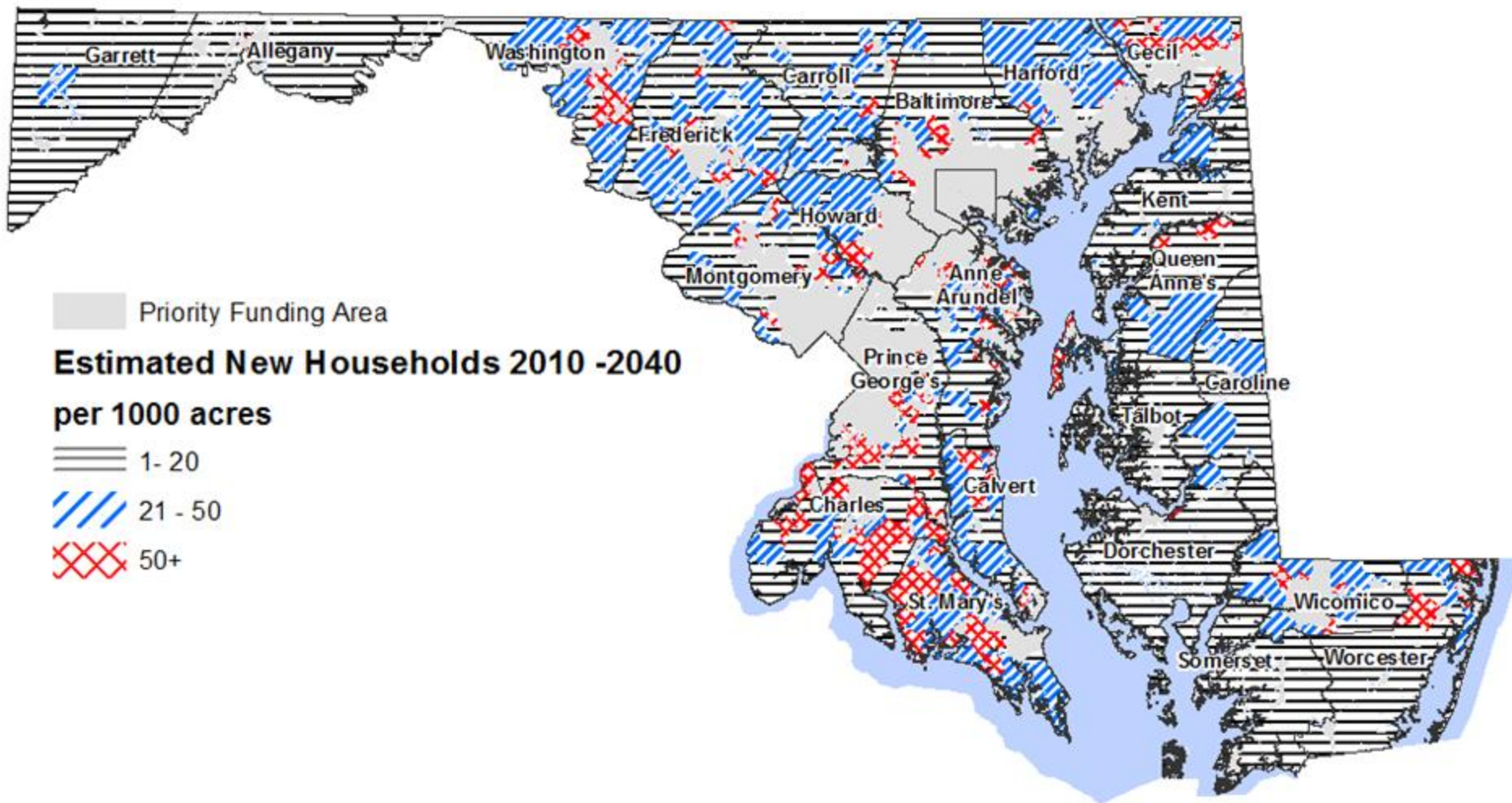
**Agricultural Land,  
183,549 acres**



**Forest Land,  
162,433 acres**



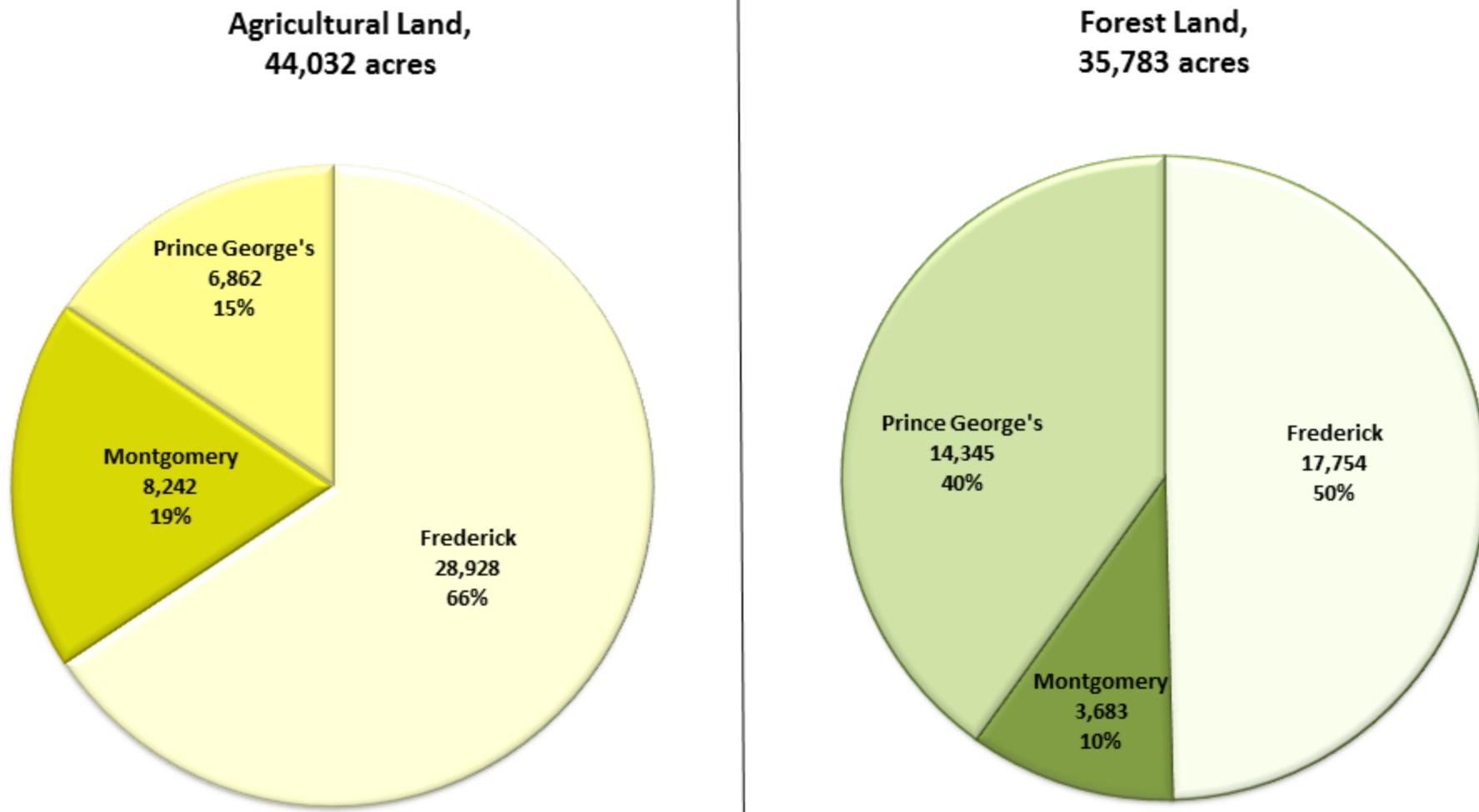
# Estimated Residential Development Outside PFAs, 2010-2040, Maryland



# Potential Loss of Agriculture and Forest Land, 2010-2040 Washington Region by County

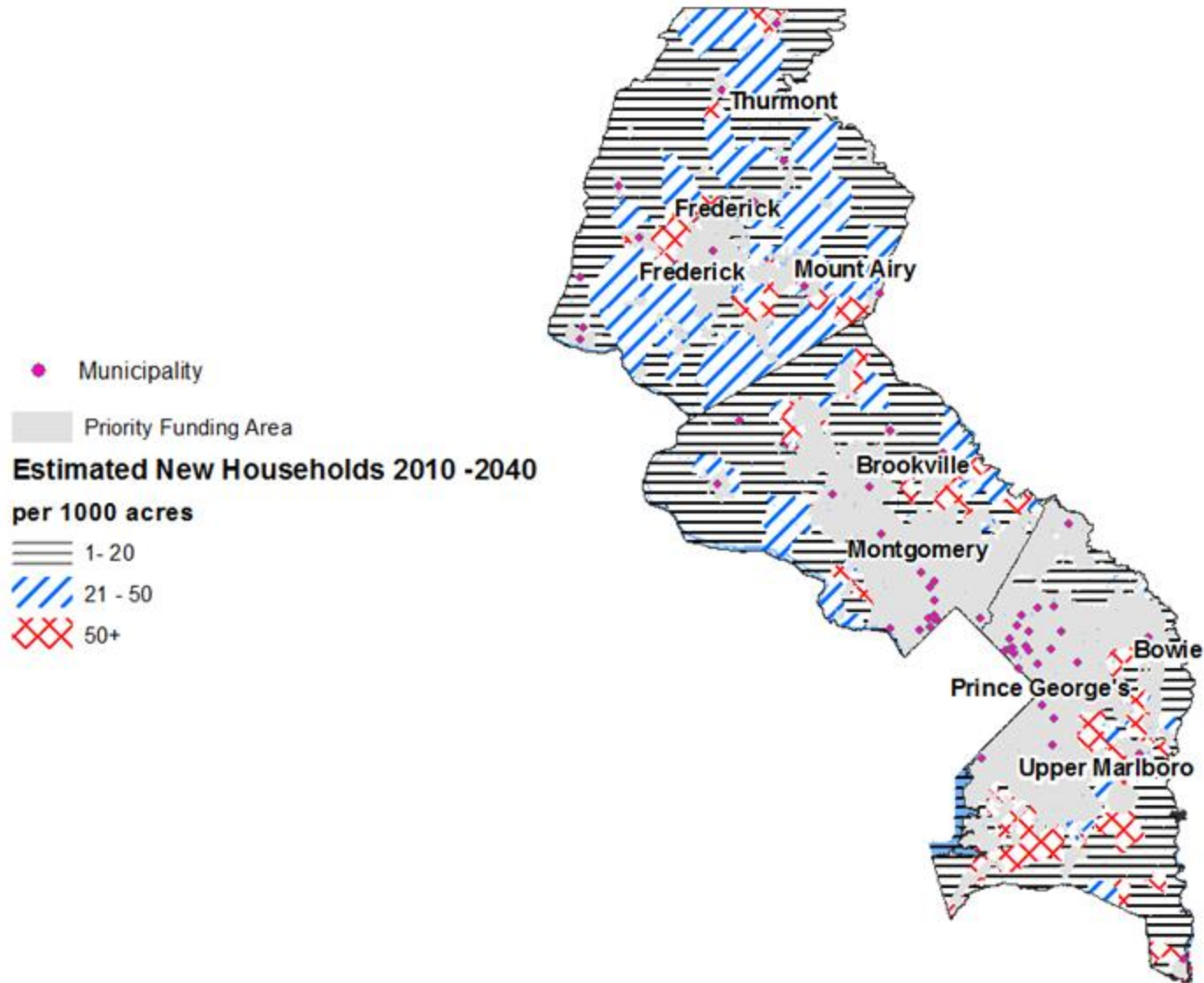
Figure 3.2-10

**Total Loss of Ag and Forest land: 79,815 acres**



# Estimated Residential Development Outside PFAs, 2010-2040, Washington Region MD

Map 3.2-6



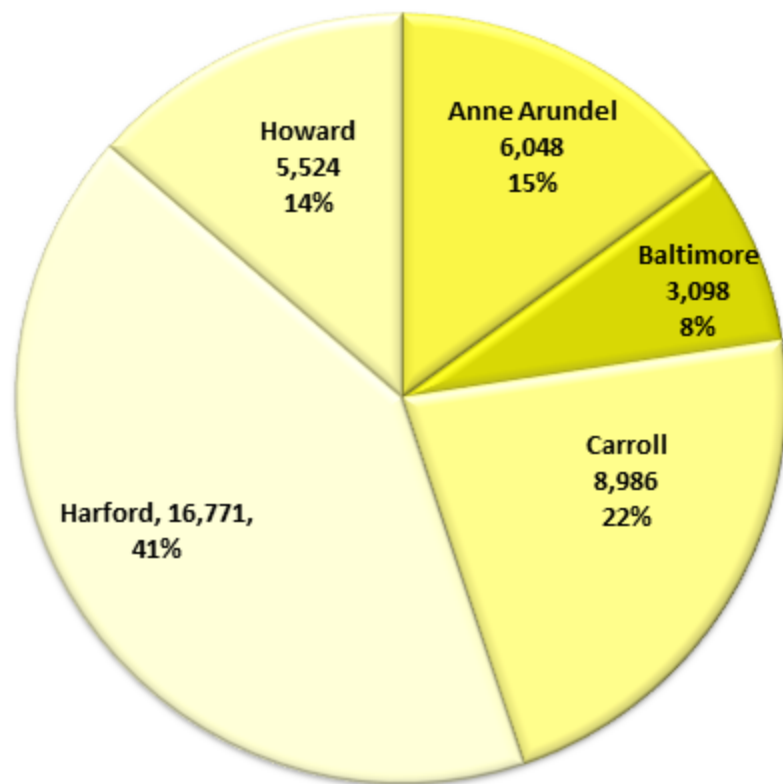
# Potential Loss of Agriculture and Forest Land, 2010-2040

## Baltimore Region by County

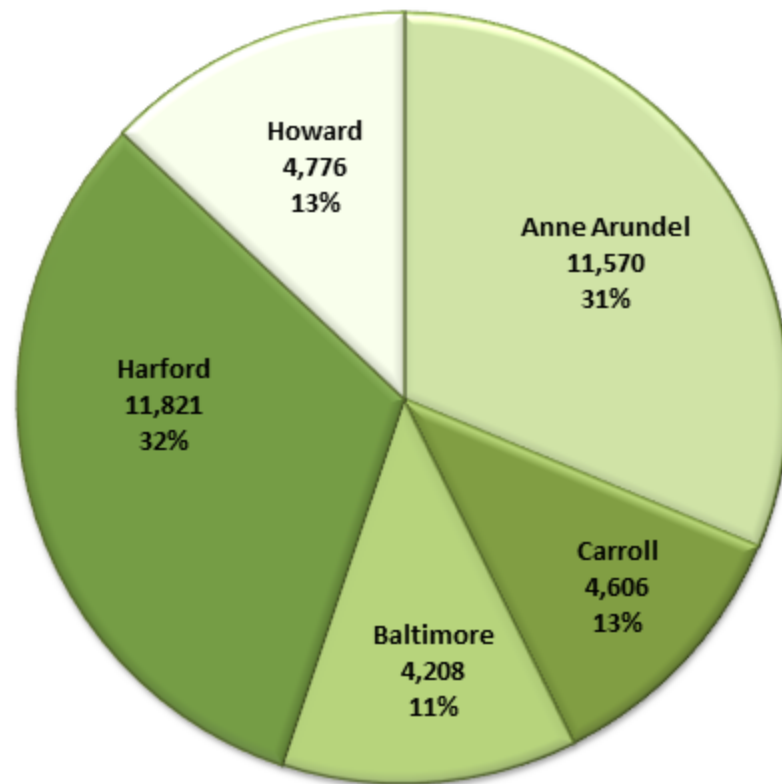
Figure 3.2-8

Total Loss of Ag and Forest land: 77,409 acres

Agricultural Land,  
40,427 acres

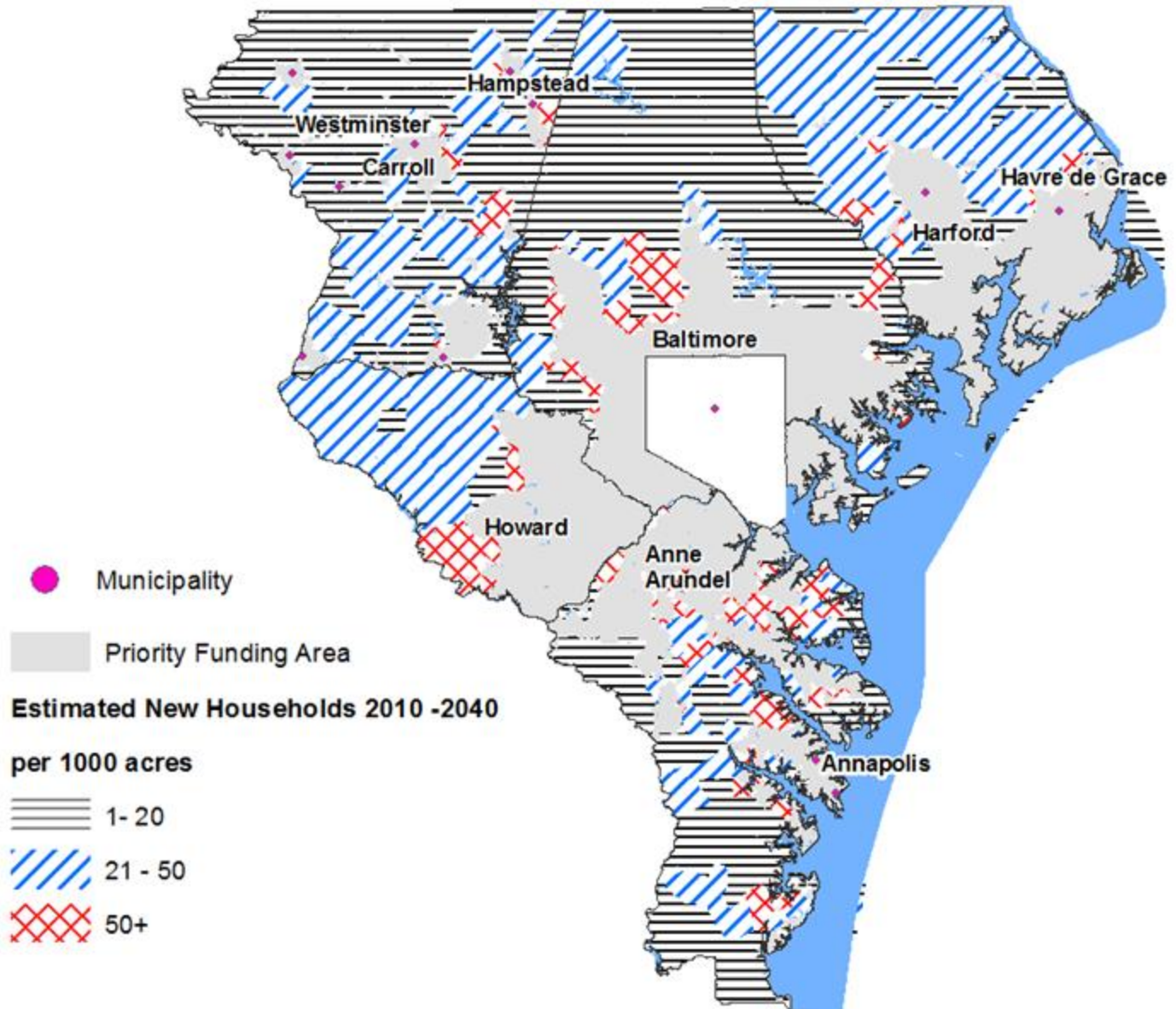


Forest Land,  
36,982 acres



# Estimated Residential Development Outside PFAs, 2010-2040, Baltimore Region MD

Map 3.2-4



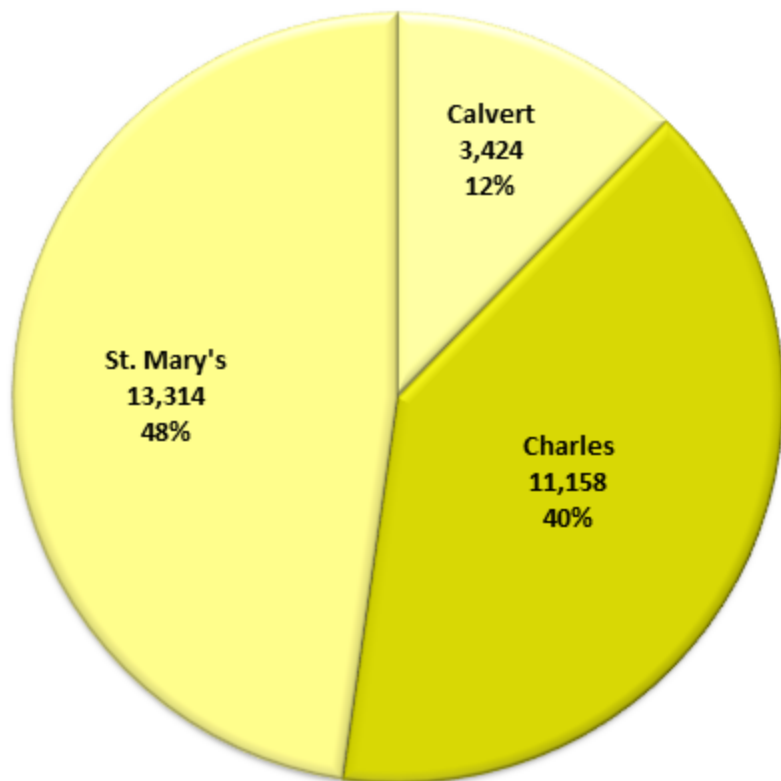
# Potential Loss of Agriculture and Forest Land, 2010-2040

## Southern Maryland by County

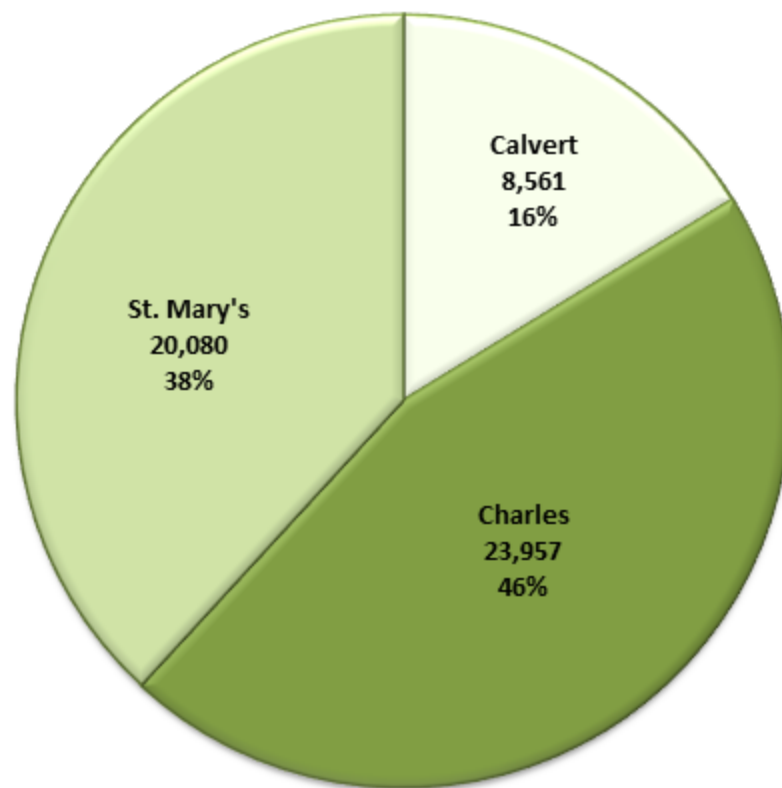
Figure 3.2-11

Total Loss of Ag and Forest land: 80,495 acres

Agricultural Land,  
27,896 acres

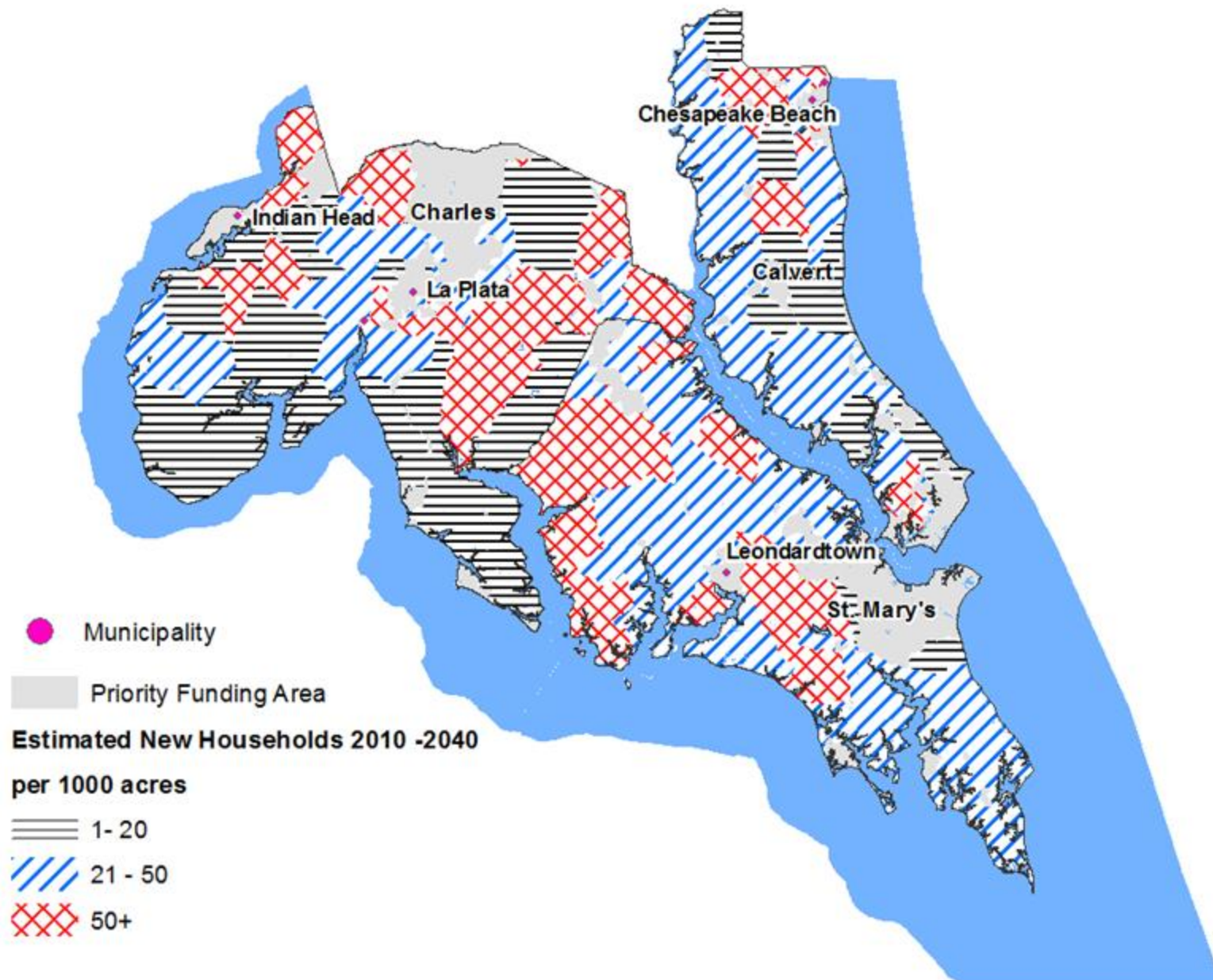


Forest Land,  
52,599 acres



# Estimated Residential Development Outside PFAs, 2010-2040, Southern MD

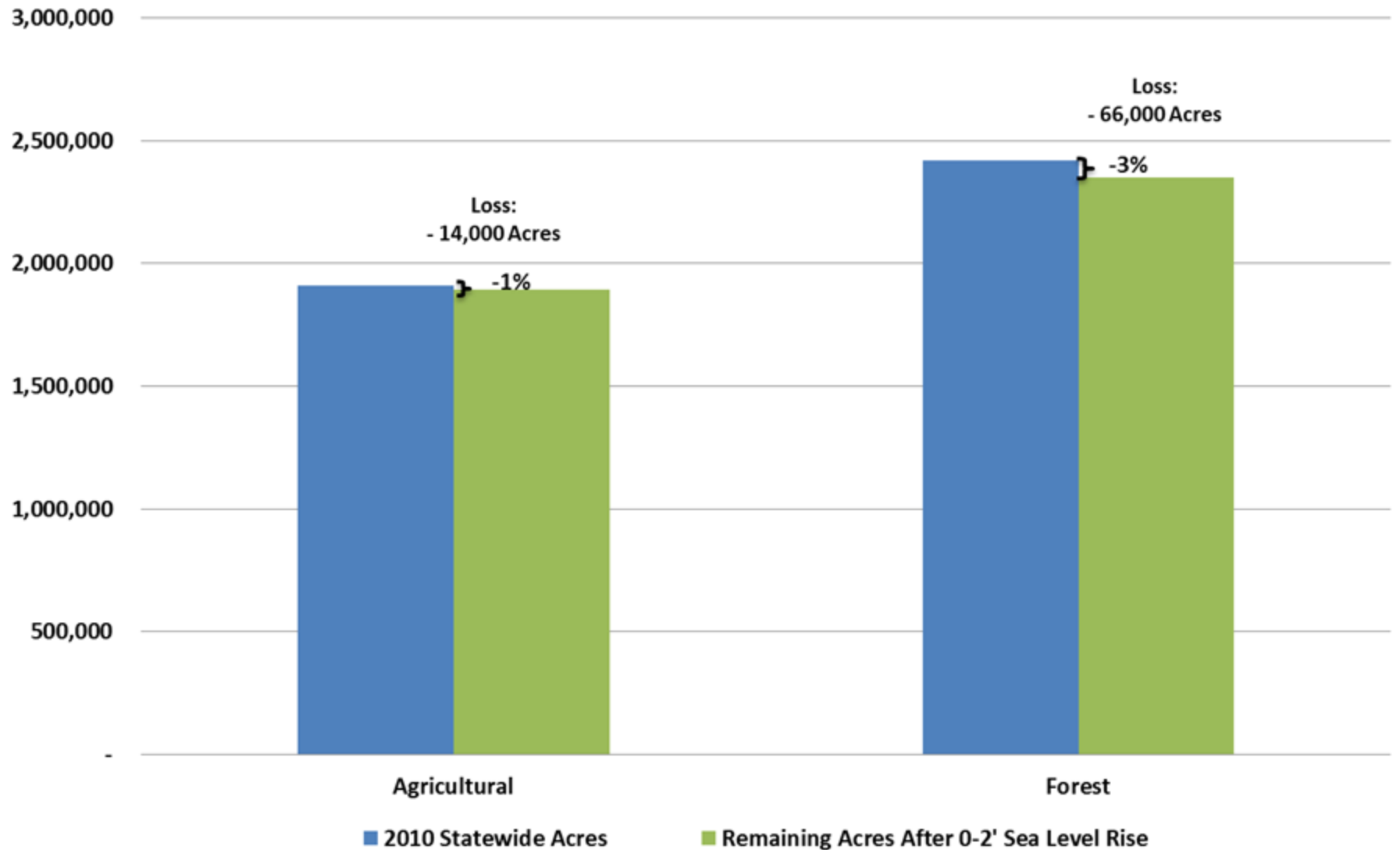
Map 3.2-7





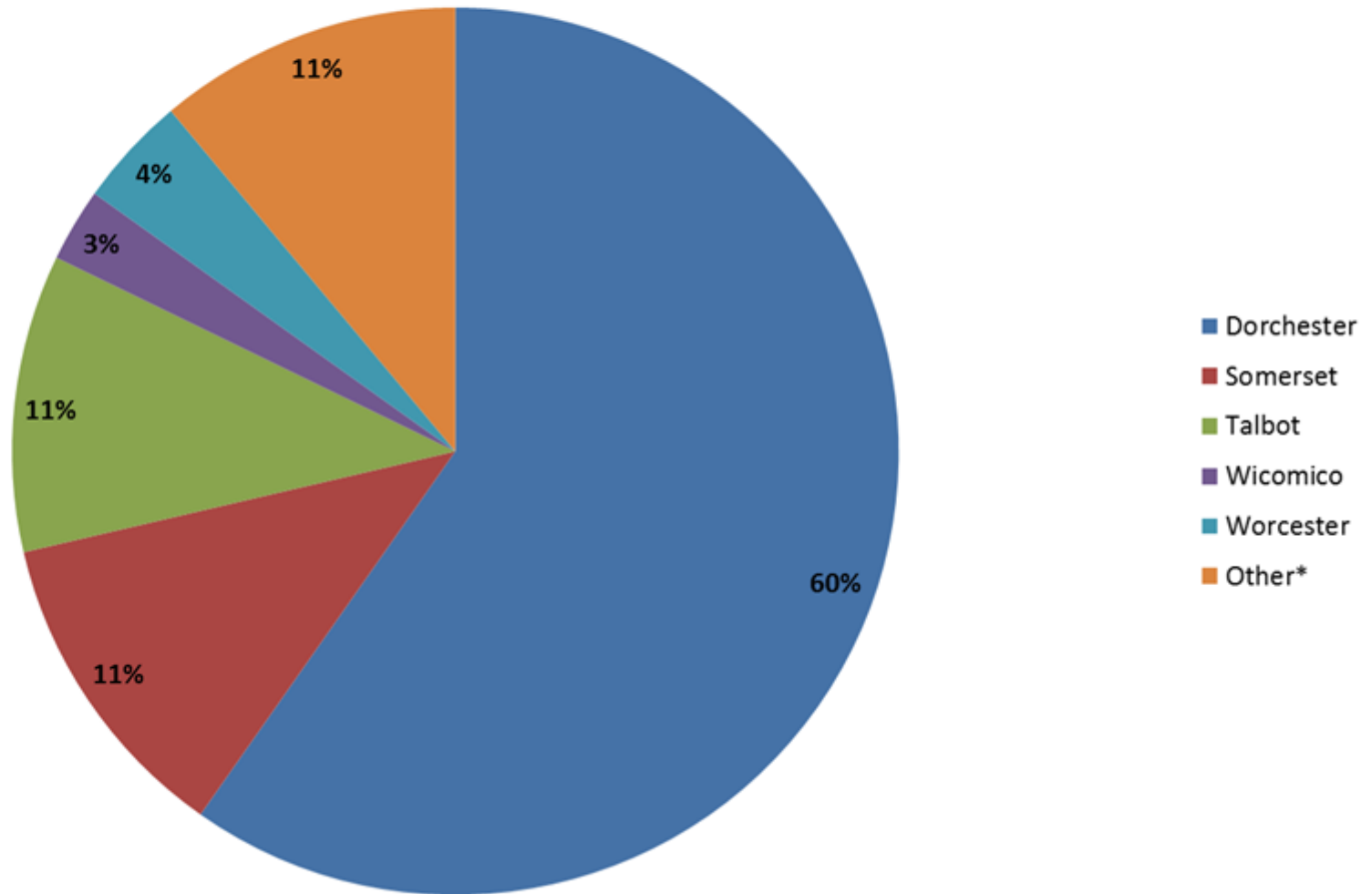
Maryland Region	Table 3.2-1 Residential Development, 1999-2012 (Actual) & 2010-2040 (Projected)					
	New Households/Yr by Region Number (& % of State Total)		% New Households in PFAs		% Developed Acres outside PFAs <sup>1</sup>	
	1999-2012 <sup>2</sup>	2010-2040 <sup>3</sup>	1999-2012 <sup>4</sup>	2010-2040 <sup>5</sup>	1999-2012	2010-2040
Central MD	6,377 (37%)	5,497 (33%)	78%	79%	74%	75%
Capital Region	5,352 (31%)	6,438 (38%)	81%	78%	63%	74%
Southern MD	2,093 (12%)	2,138 (13%)	51%	46%	88%	88%
Upper Eastern Shore	1,310 (8%)	1,181 (7%)	57%	47%	83%	85%
Lower Eastern Shore	1,144 (7%)	788 (5%)	60%	42%	78%	89%
Western MD	899 (5%)	732 (4%)	47%	48%	86%	88%
Statewide	17,176 (100%)	16,773 (100%)	71%	68%	77%	81%

**Figure 3.3-1**  
**Statewide Resource Lands Potentially Lost to 0-2' Sea Level Rise**  
**Projected by 2050**



# Potential Loss of Agricultural Lands to 0-2 Ft Sea Level Rise, Maryland's Eastern Shore (as % of Eastern Shore Total)

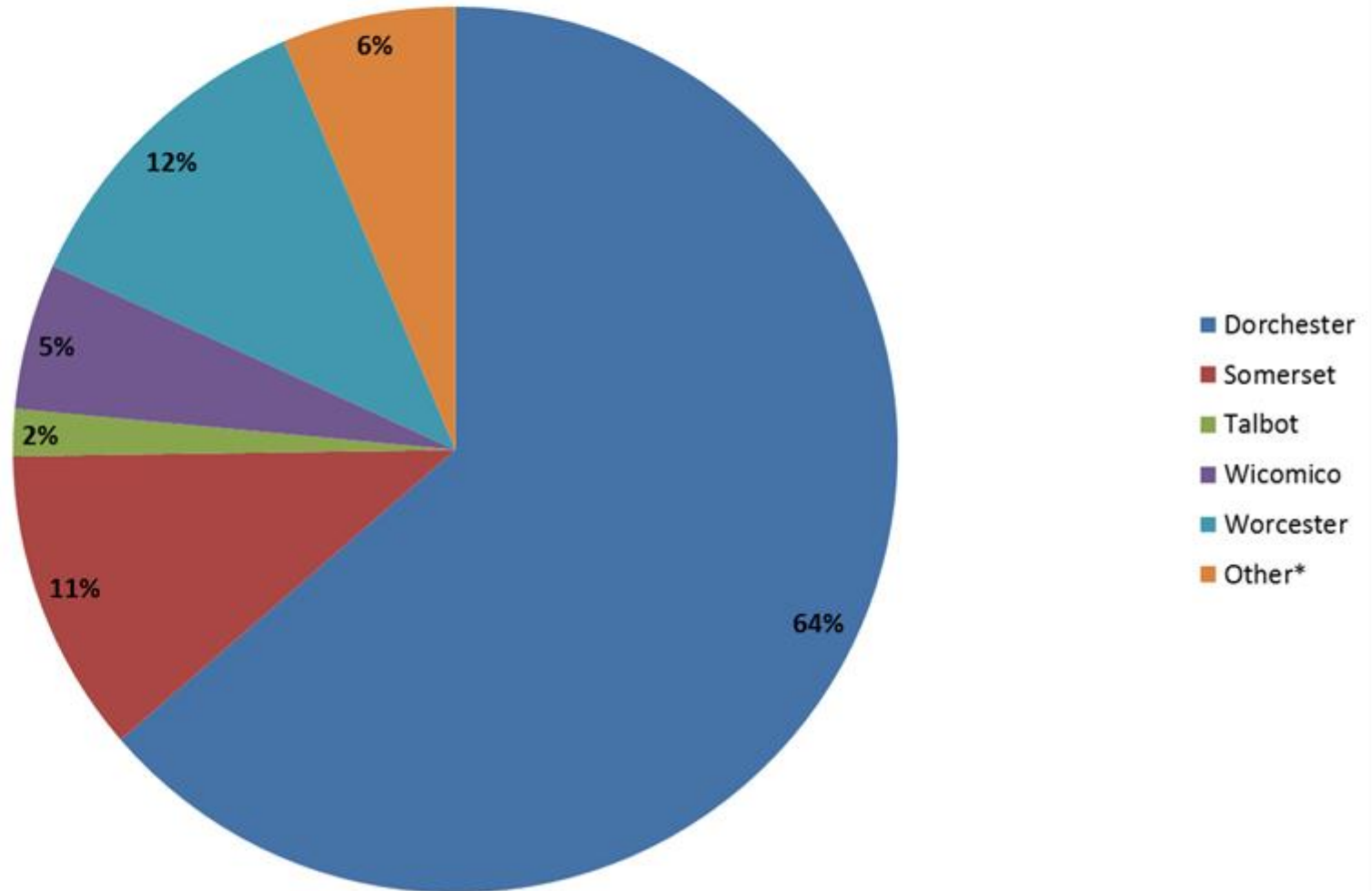
Loss:  
13,000 Acres



\*Includes Caroline, Cecil, Kent, and Queen Anne's Counties.

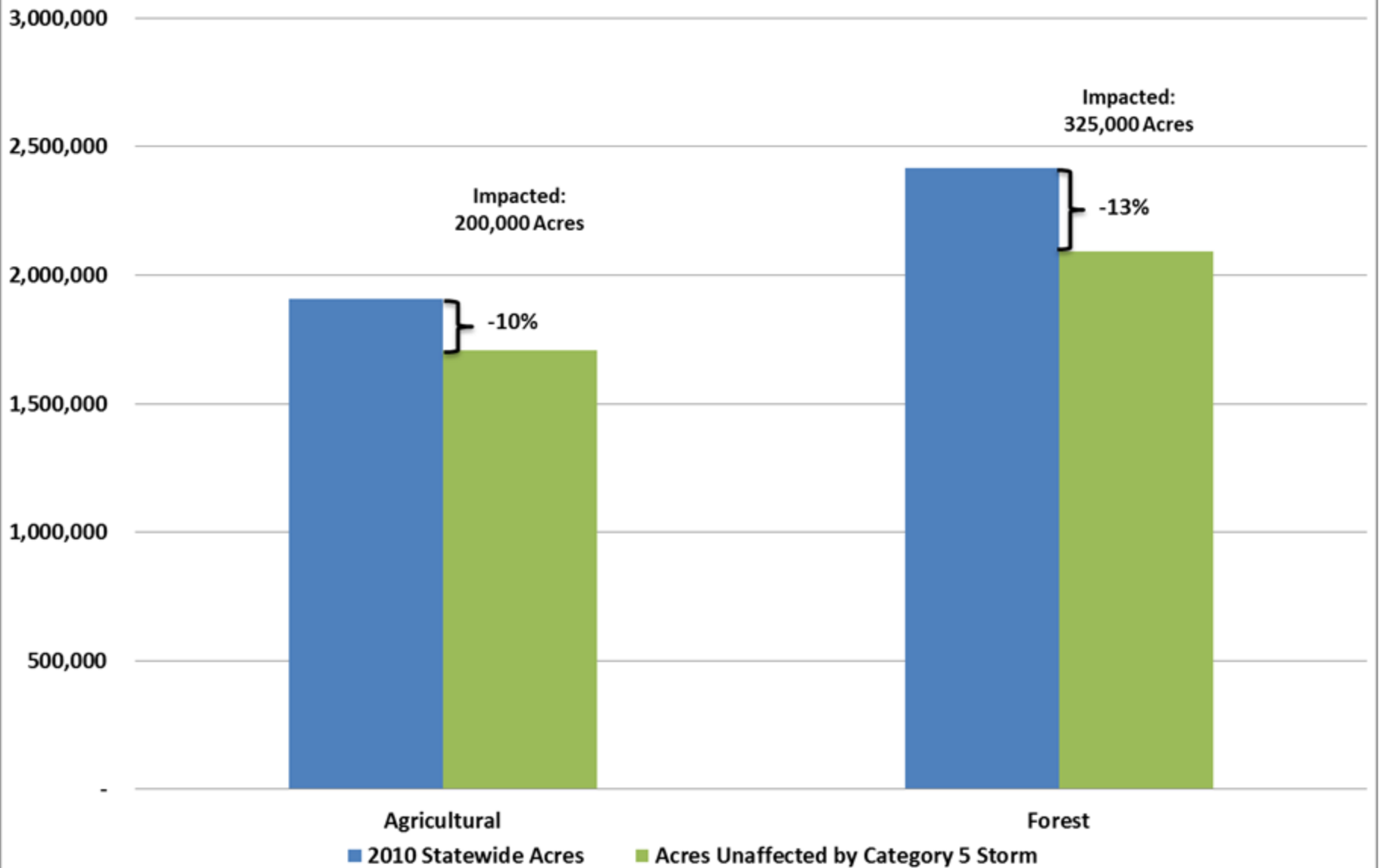
# Potential Loss of Forest Lands to 0-2 Ft Sea Level Rise, Maryland's Eastern Shore (as % of Eastern Shore Total)

Loss:  
60,00 Acres



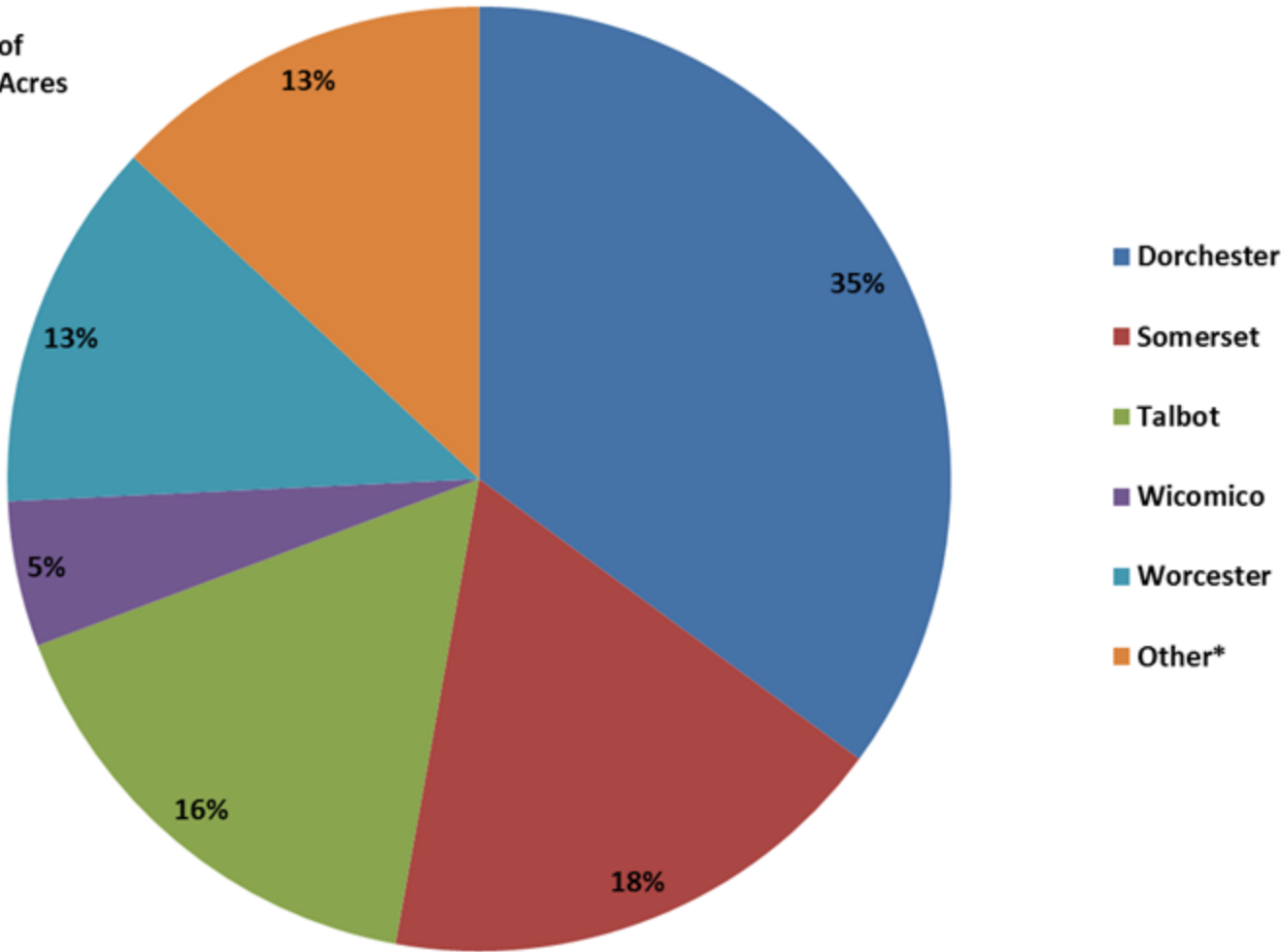
\*Includes Caroline, Cecil, Kent, and Queen Anne's Counties.

**Figure 3.3-2 Statewide Acres Potentially Affected by Storm Surge  
(Category 5 Storm)**



# Potential Loss of Agricultural Lands to Category 5 Storm Surge, Maryland's Eastern Shore (as % of Eastern Shore Total)

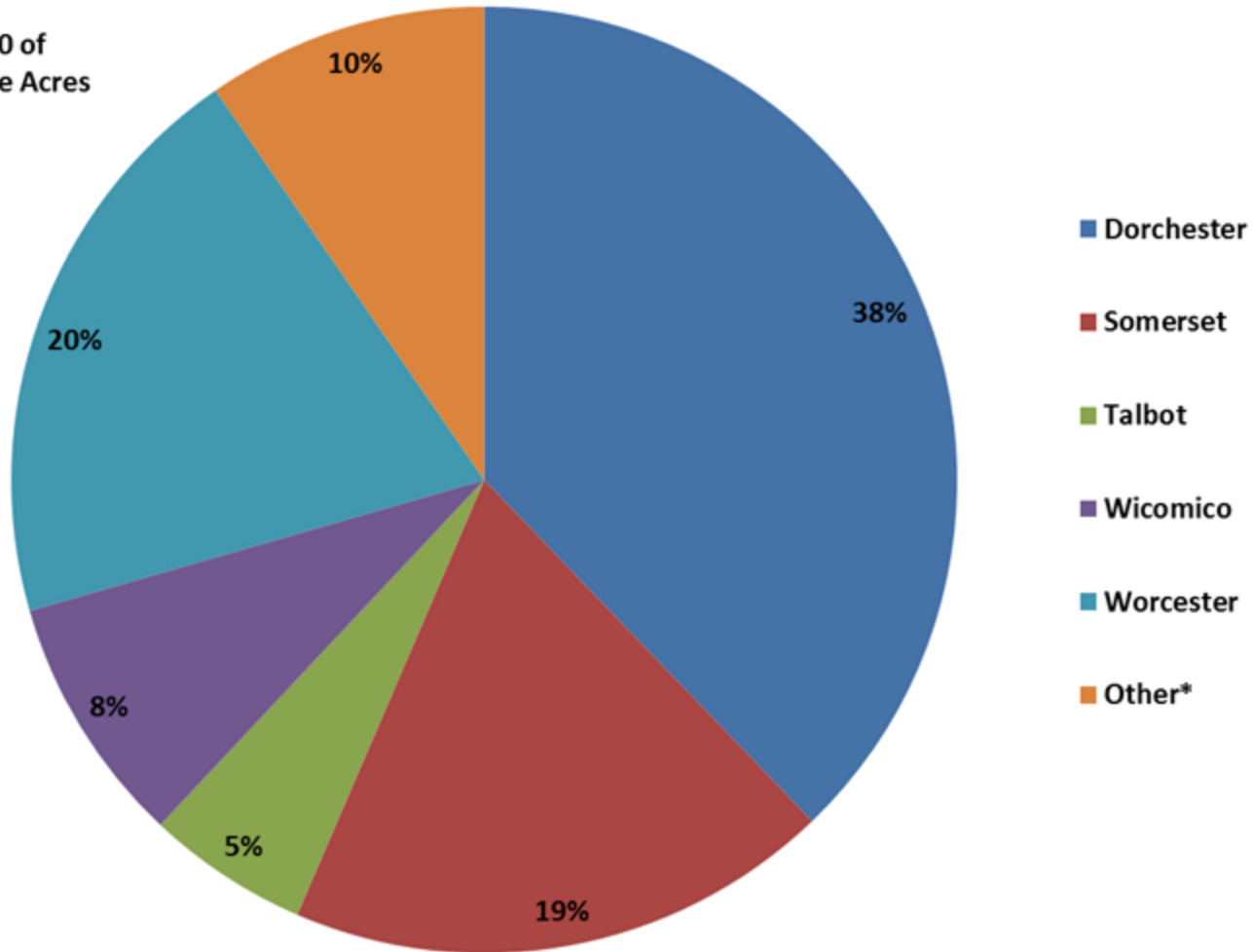
Impacted: 176,000 of  
200,000 Statewide Acres



\*Includes Caroline, Cecil, Kent, and Queen Anne's Counties.

# Potential Loss of Forest Lands to Category 5 Storm Surge, Maryland's Eastern Shore (as % of Eastern Shore Total)

Impacted: 258,000 of  
325,000 Statewide Acres



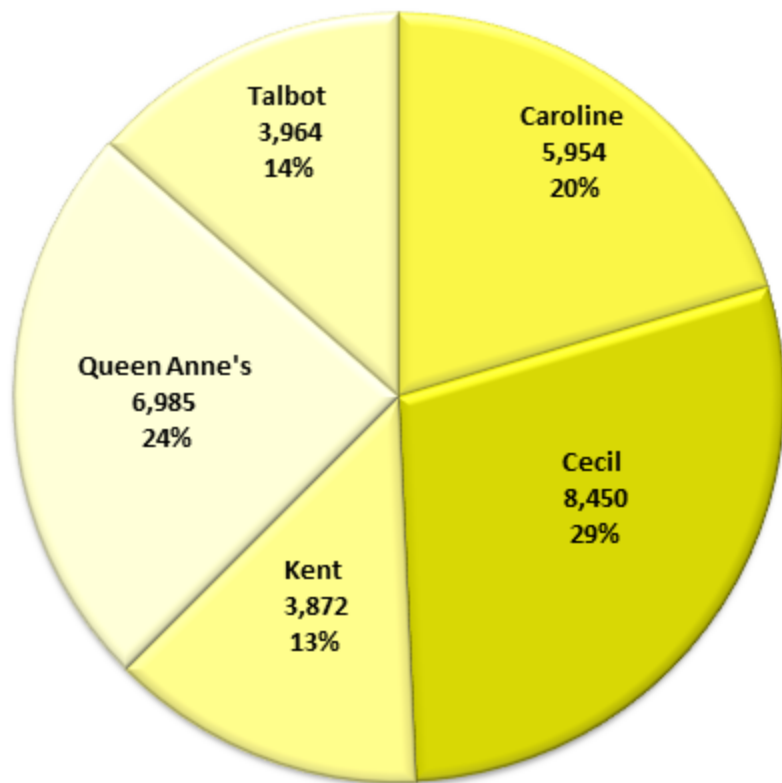
\*Includes Caroline, Cecil, Kent, and Queen Anne's Counties.

# Potential Loss of Agriculture and Forest Land, 2010-2040 Upper Eastern Shore Region by County

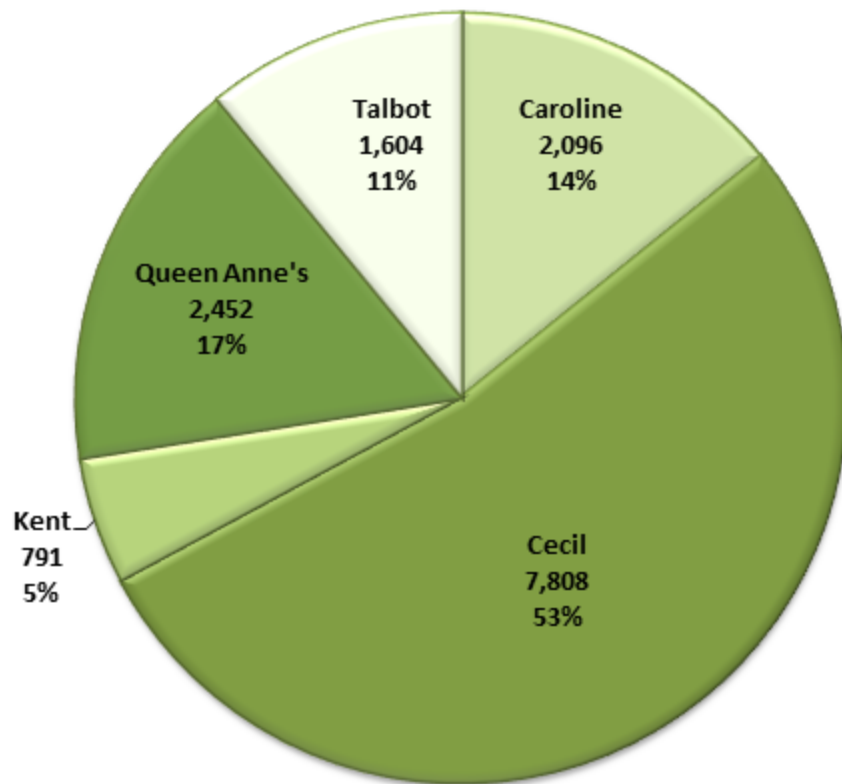
Figure 3.2-9

**Total Loss of Ag and Forest land: 43,977 acres**

**Agricultural Land,  
29,225 acres**



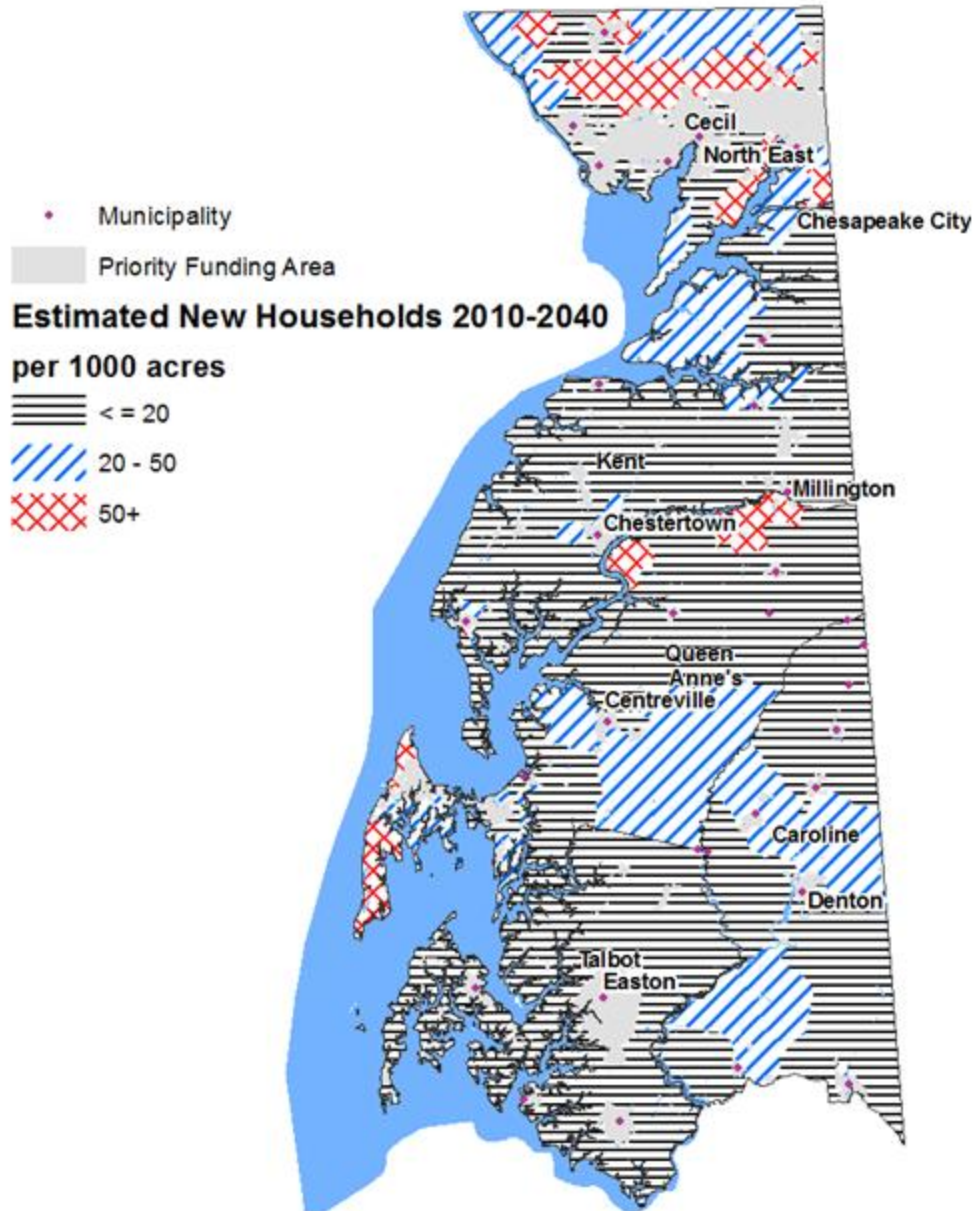
**Forest Land,  
14,752 acres**





# Estimated Residential Development Outside PFAs, 2010-2040, Upper Eastern Shore MD

Map 3.2-5

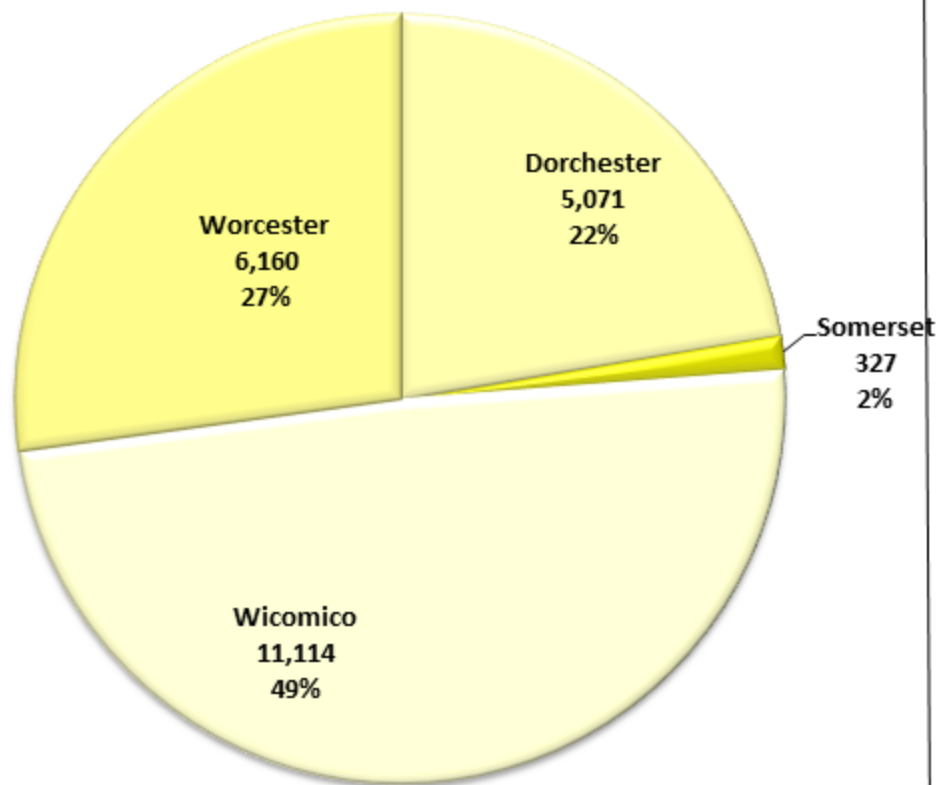


# Potential Loss of Agriculture and Forest Land, 2010-2040 Lower Eastern Shore Region by County

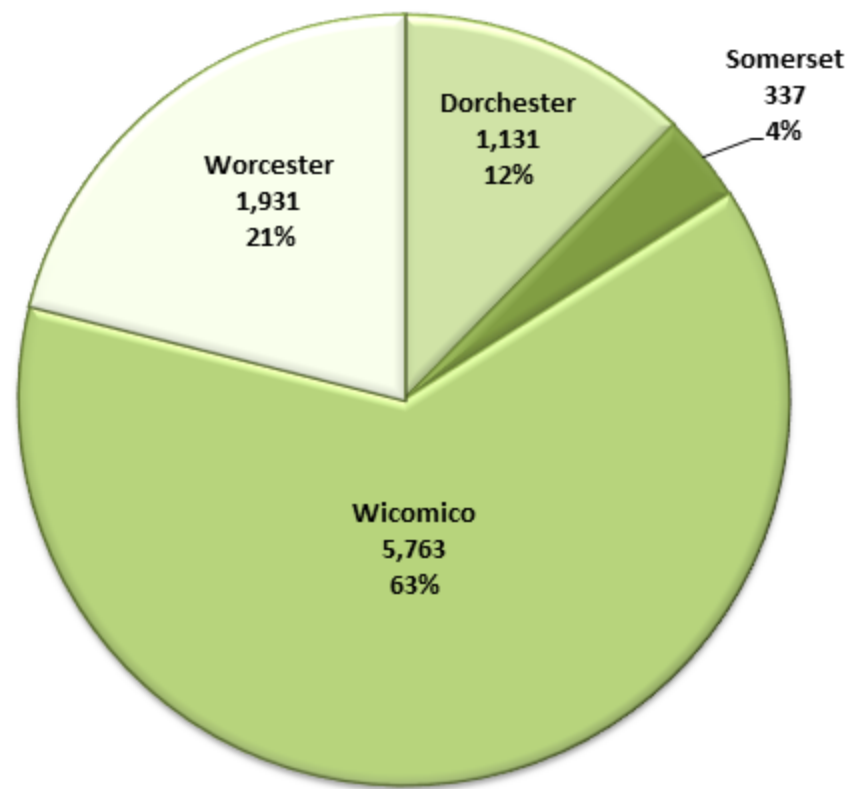
Figure 3.2-12

Total Loss of Ag and Forest land: 31,833 acres

Agricultural Land,  
22,671 acres

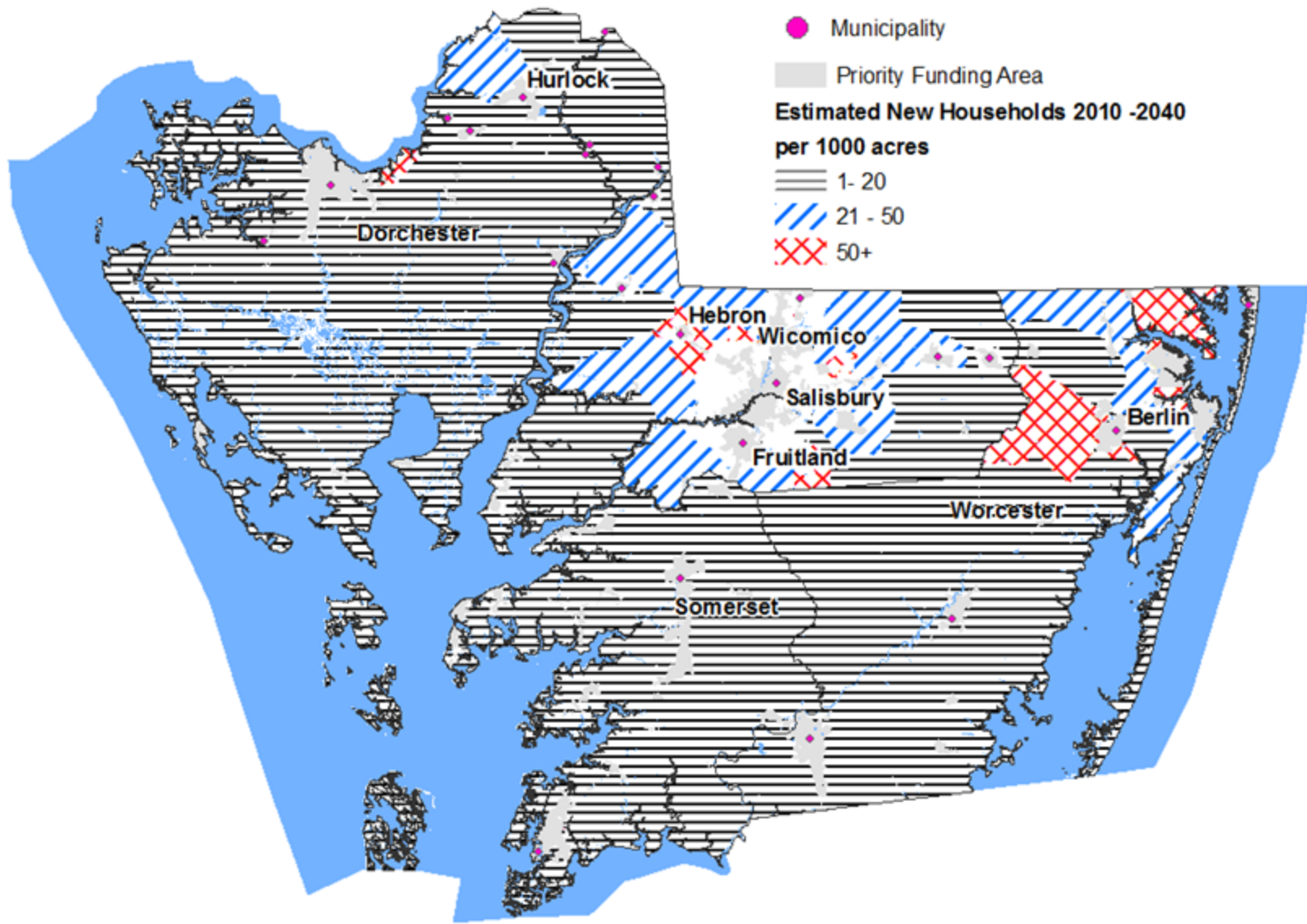


Forest Land,  
9,161 acres



# Estimated Residential Development Outside PFAs, 2010-2040, Lower Eastern Shore MD

Map 3.2-8

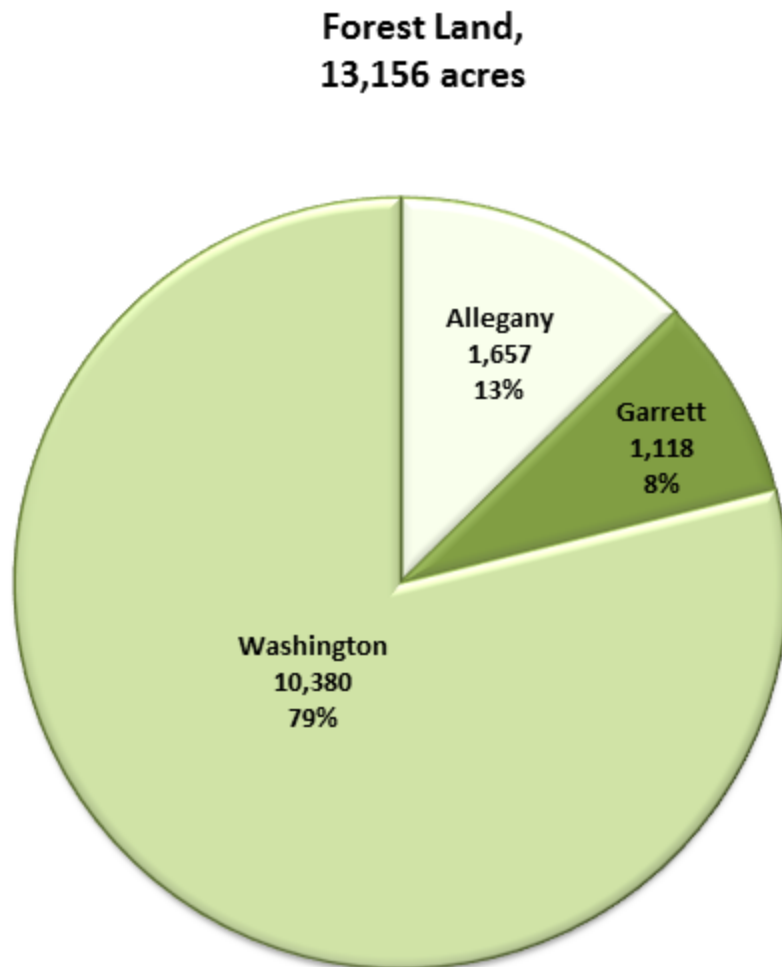
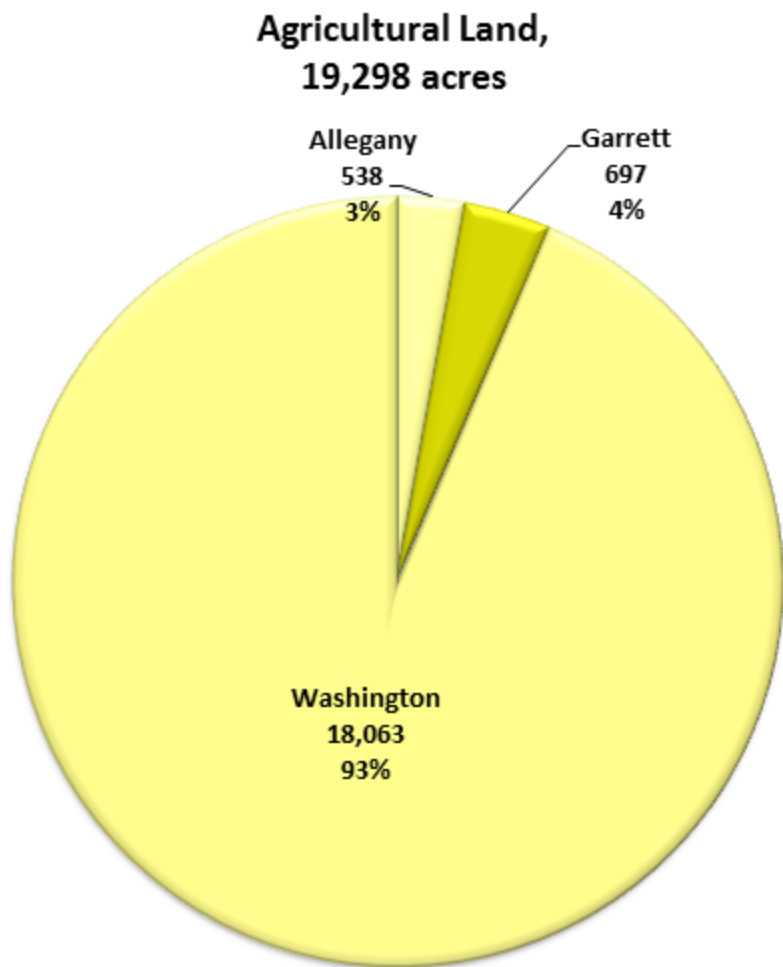


# Potential Loss of Agriculture and Forest Land, 2010-2040

Figure 3.2-7

## Western Maryland by County

Total Loss of Ag and Forest land: 32,454 acres



# Estimated Residential Development Outside PFAs, 2010-2040, Western Maryland

