# THE FUTURE OF SUSTAINABLE FARMING & FORESTRY IN MD

Research Supported by the

Harry R. Hughes Center

for Agro-Ecology

American Farmland Trust, Maryland Department of Planning, and Land Stewardship Solutions LLC

UMCP Department of Agricultural and Resource Economics

Vision Forestry

Maryland Department of Planning

# WHAT'S AT STAKE

Large sectors of MD's rural economy

- Farming: $2.3 billion sales, $4.7 billion direct output, over 22,000 jobs, $2.03 billion indirect and induced impacts

- Forest products: $1.2 billion for materials, $2.3 billion shipments, $1.1 billion value added, $43 million capital expenses, 10,000 jobs for $650 m

Food security & environmental/ ecosystem services

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# KEY QUESTIONS

1. What's sustainability?
2. Where are farming & forestry headed under existing trends in markets, profitability?
3. Effects of environmental & smart growth policies?
4. Can policy evolve to help?

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# SUSTAINABLE FARMING & FORESTRY

Profitable industries that support productive, healthy soils, working landscapes, quality of water and natural resources in surrounding environment.



Taste the Grass Fed Difference

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# METHODS

- Published & other reports, data
- Interviews, consultations
- Growth/ land use projections & impacts
- Draft report

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- Stakeholder/ expert review & input
- Final Report

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# Where are farming & forestry headed under existing trends and policies?

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- Better technology, yields, info
- Commodity support/ trade
- Globalized markets
- Food Industry consolidation
- Specialized, large scale prod
- Land developed, fragmented
- Nutrient, phosphorus mgmt
- Efficiency benefits, some sectors

**MD Agriculture 1900's to 2000's: What Changes, Why?**



- Fewer MD wholesalers, retailers, direct marketing
- Less diversity in production, marketing, sales
- ↓Costs to consumer
- ↓Commodity Mkt shares
- ↓Farms, farmers
- ↓MD veges, fruit, canneries, cows, corn



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# Nutrient Management – 1987, 2012, 2014



Not caused massive farm failure
- Improved efficiency & Mgmt.
- Pushed tech advancement
- Cost share
- Sufficient phase-in time to adjust

- Time and cost increase
- Contributed to loss of mid-size farm/ especially dairy
- Rigidity of regs difficult fit with diversity of conditions.
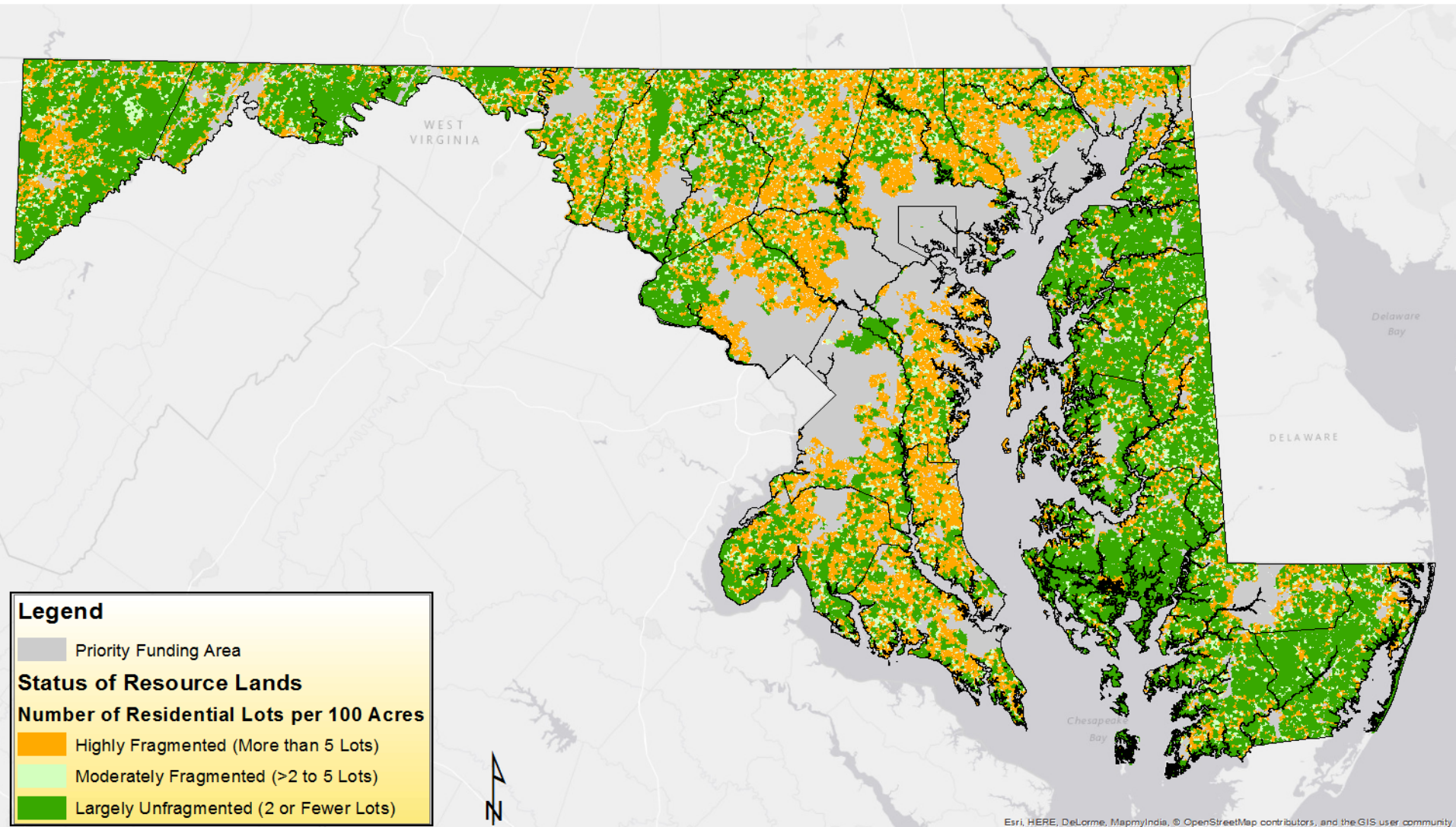- Evolving policy = Moving goal posts



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# Figure 3.2-1

## Reduction in Farm Acres vs. Change in Economic Rank
## Maryland Counties, 1939 - 2012



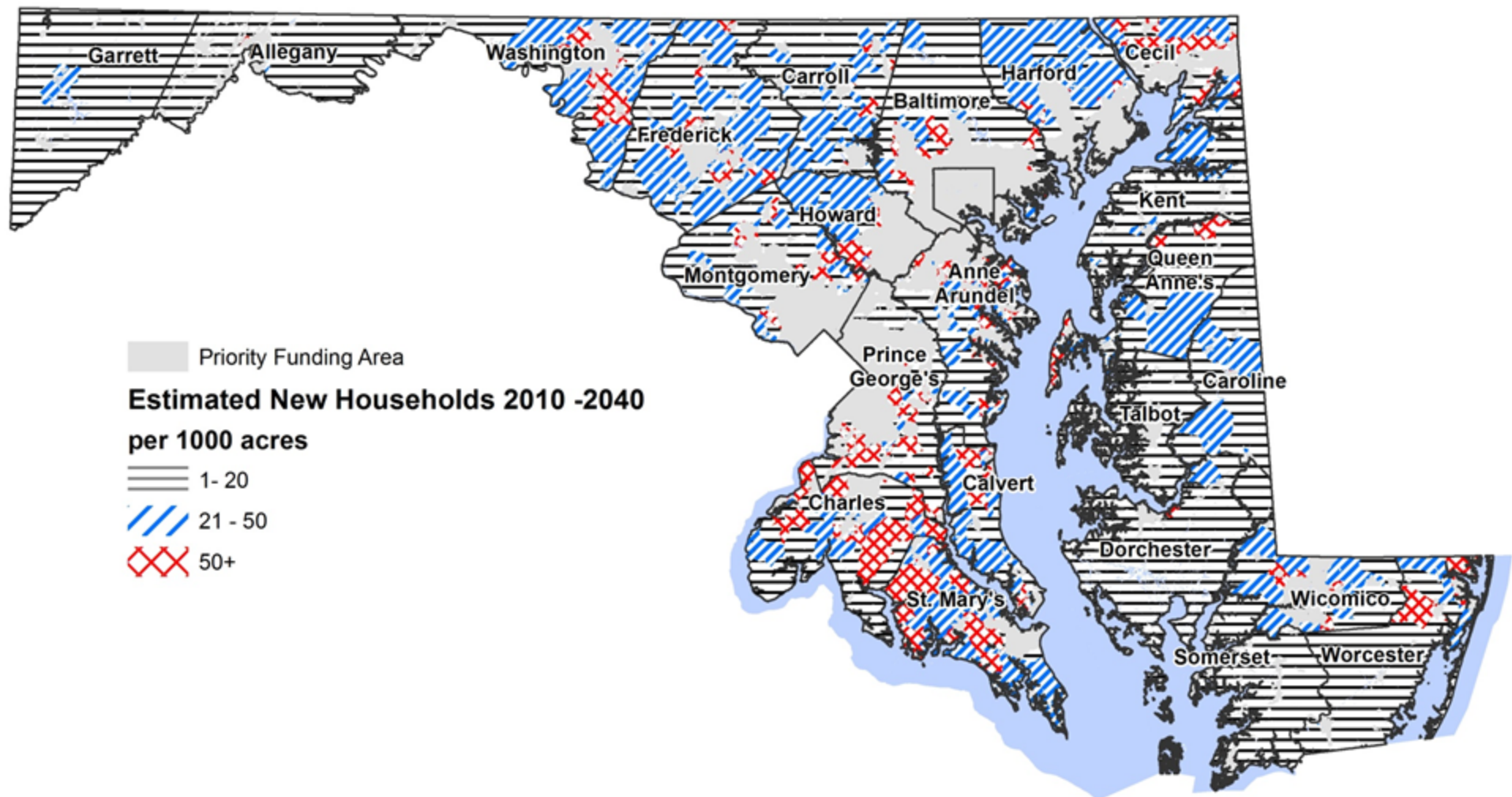■ Percent Farm Acres Lost (1939 - 2012)  ■ Change in Rank (1939 - 2012)
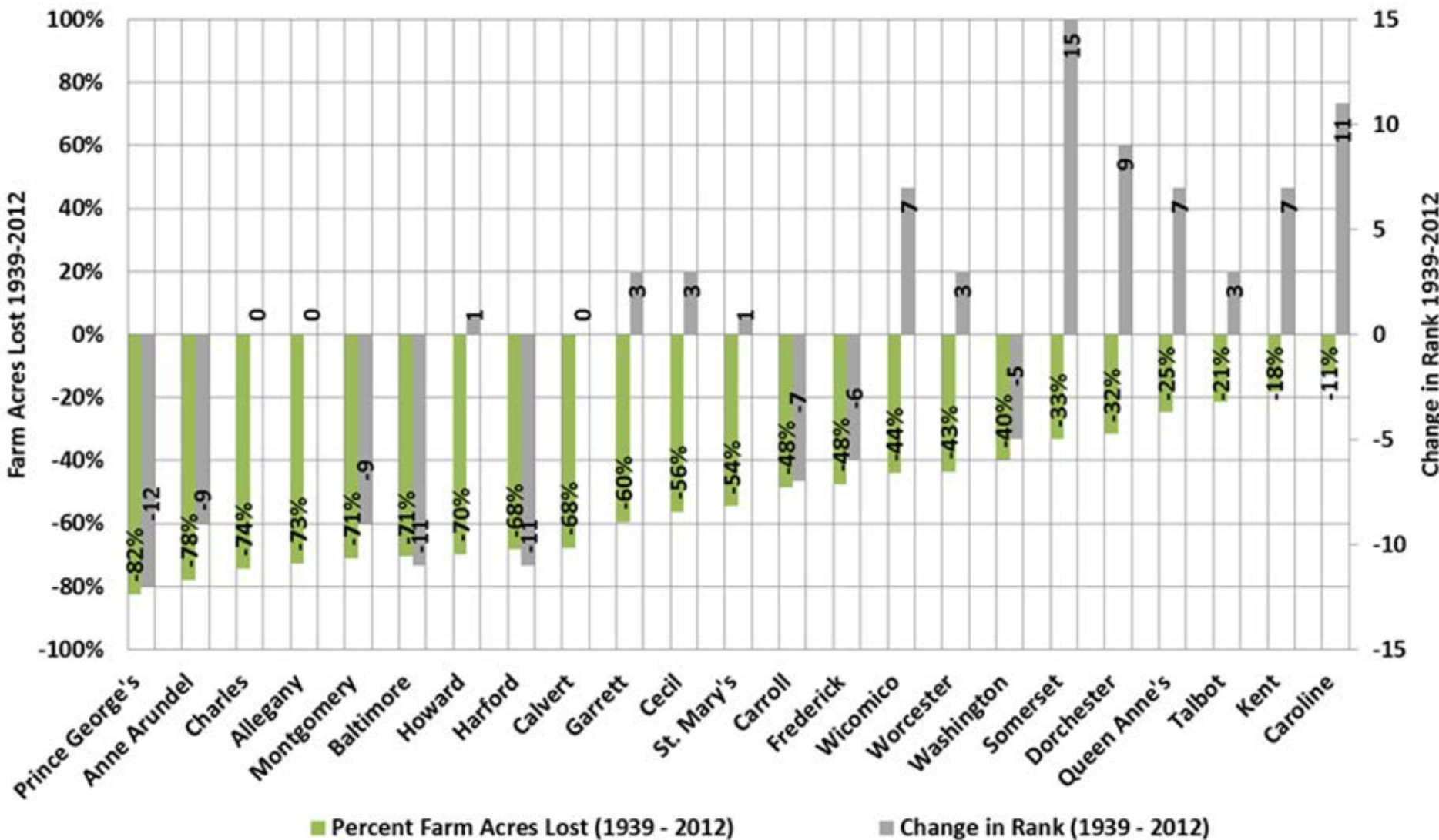
Source: Census of Agriculture. Farms are defined as any place where $1000 or more of agricultural products are produced or sold. Economic rank is based on total sales of agricultural products.

# Residential Fragmentation of Rural Resource Lands, 2012



Legend

Priority Funding Area

**Status of Resource Lands**

**Number of Residential Lots per 100 Acres**

- Highly Fragmented (More than 5 Lots)
- Moderately Fragmented (>2 to 5 Lots)
- Largely Unfragmented (2 or Fewer Lots)

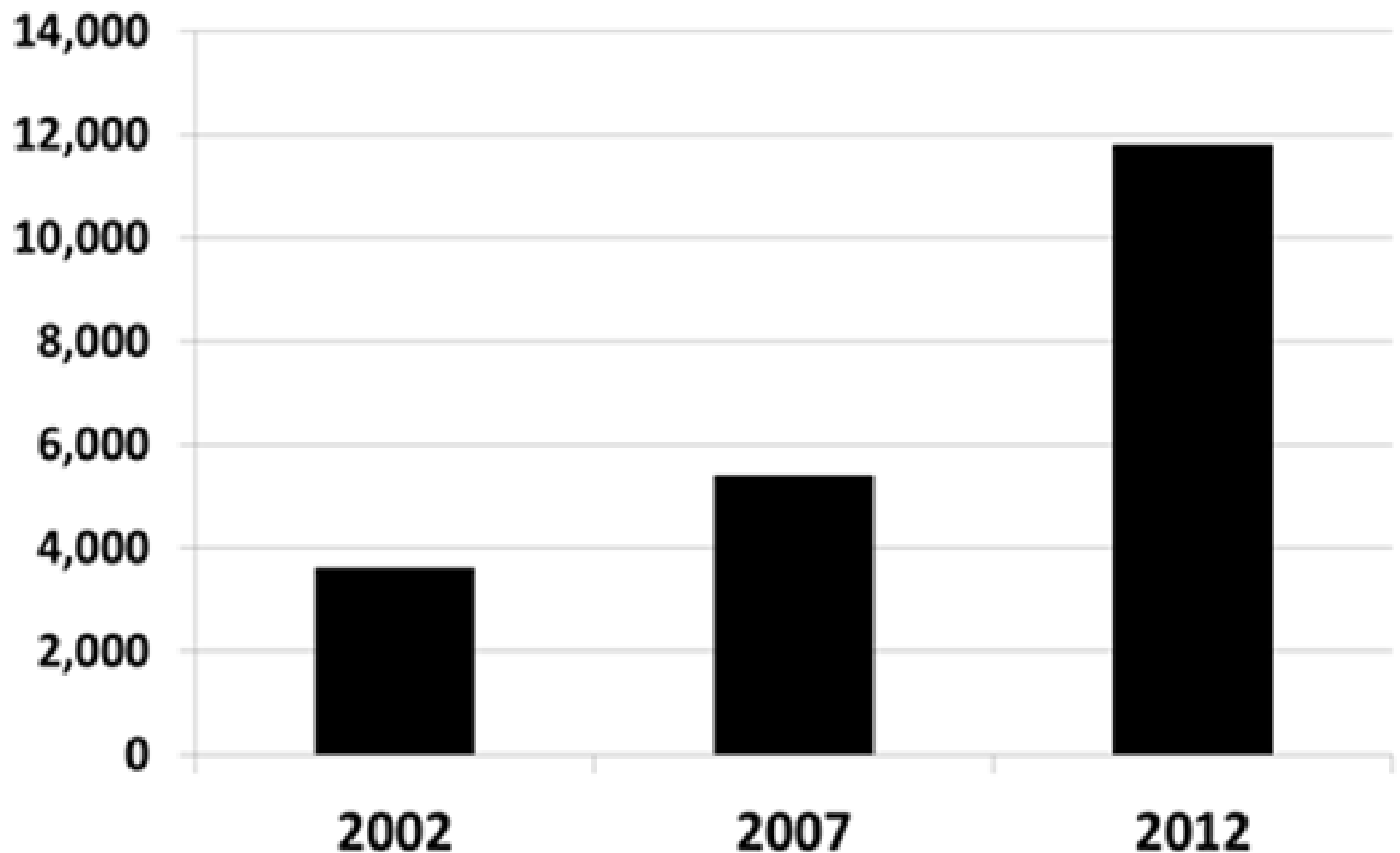Estimated Residential Development Outside PFAs, 2010-2040, Maryland

# Direct Sales of Farm Products Sold in Maryland ($1,000)



| Year | Value |
|------|-------|
| 1997 | ~8,800 |
| 2002 | ~12,500 |
| 2007 | ~21,200 |
| 2012 | ~28,000 |
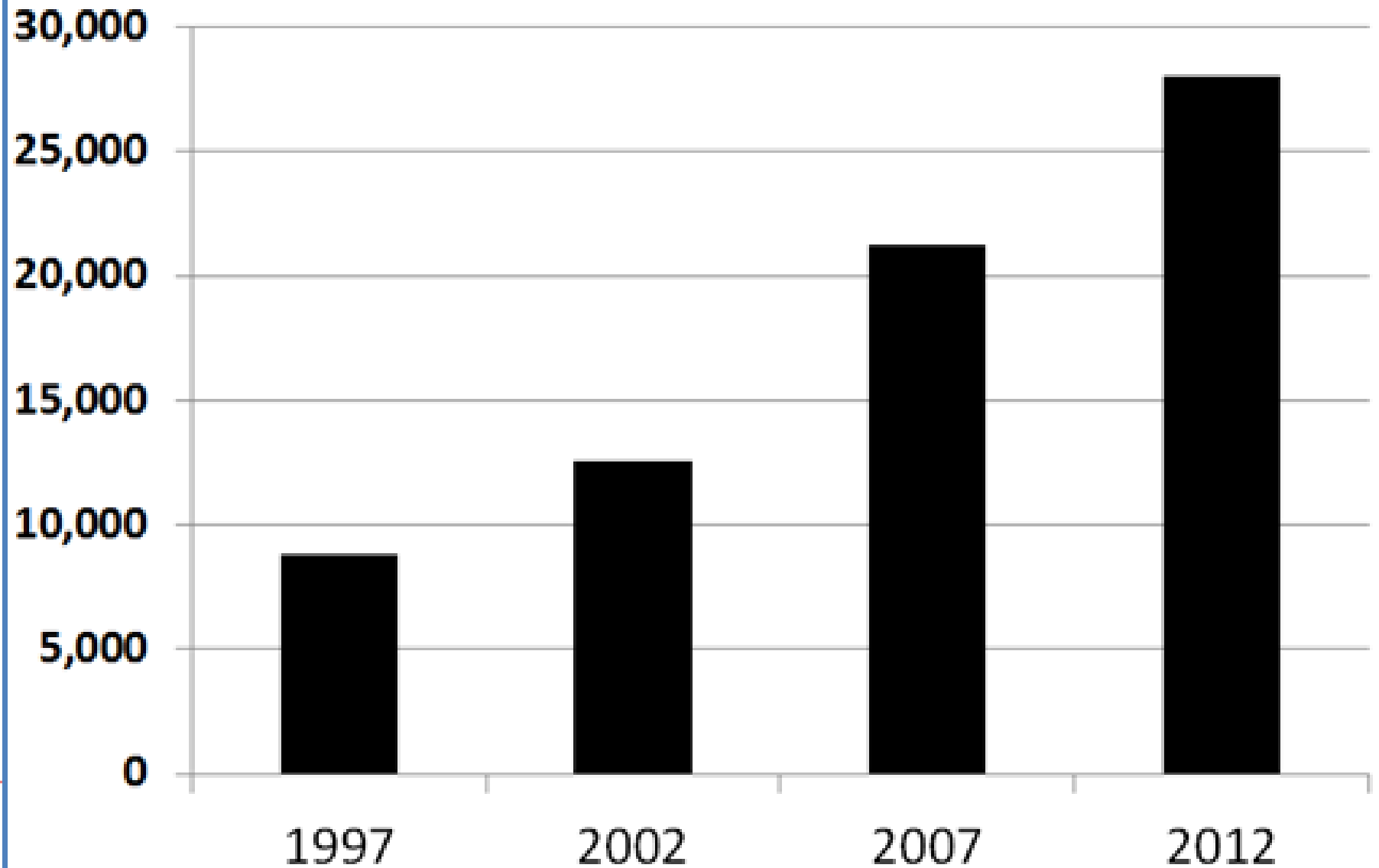
**Value of Sales of Certified or Exempt Organically Produced Commodities in Maryland ($1,000)**

# MD Aquaculture Sales
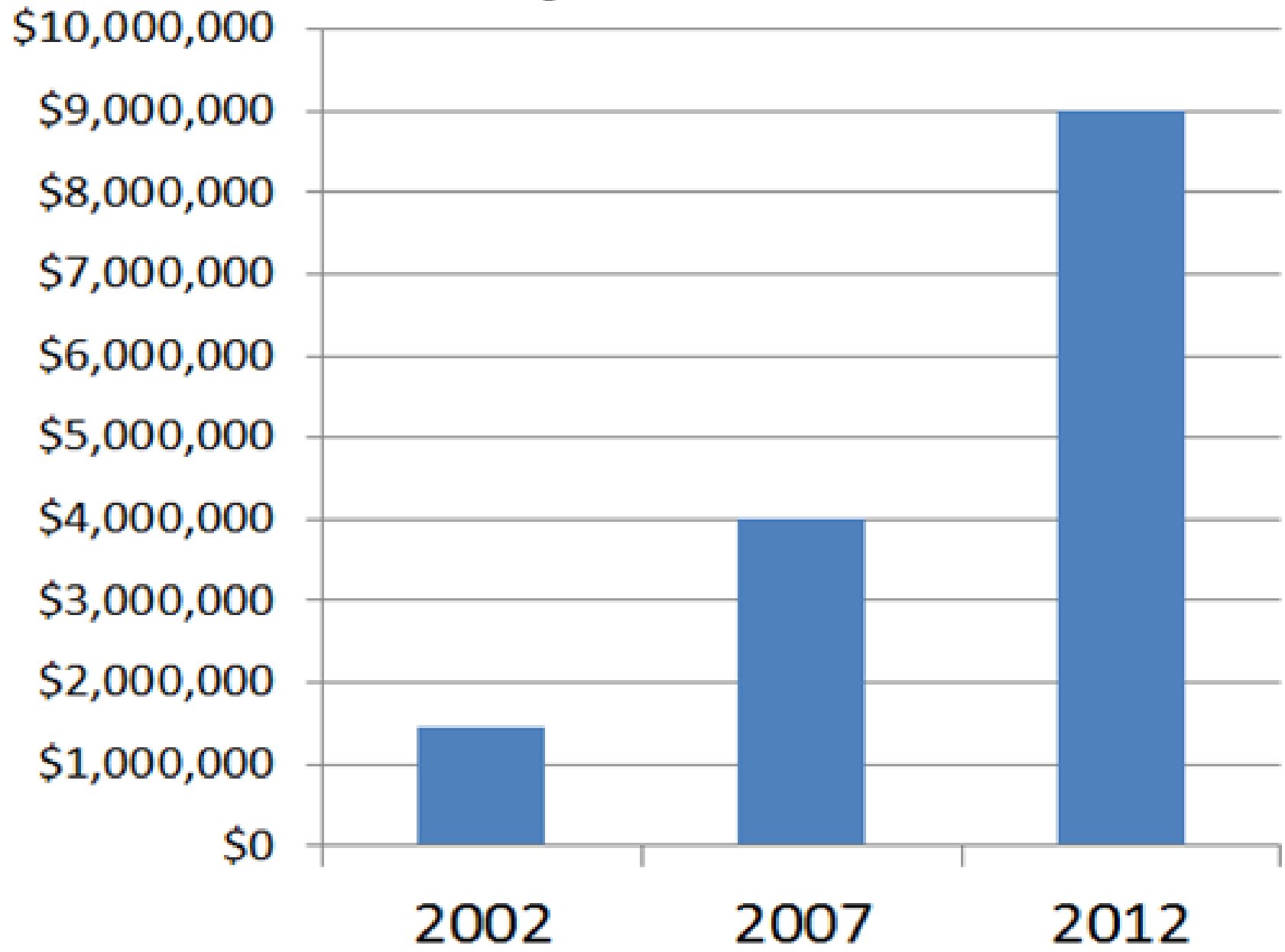
| Year | Sales |
|------|-------|
| 2002 | ~$1,450,000 |
| 2007 | $4,000,000 |
| 2012 | $9,000,000 |

| Maryland 2012 Census of Agriculture | Farms | Sales ($1,000) | Rank by Sales in MD | Percent of Total Sales |
|---|---|---|---|---|
| **Item** | | | | |
| Total Sales | 12,256 | 2,271,397 | (X) | 100.0 |
| | | | | |
| Poultry and eggs | 1,688 | 922,999 | 1 | 40.6 |
| Grains, oilseeds, dry beans, and dry peas | 3,769 | 716,348 | 2 | 31.5 |
| Nursery, greenhouse, floriculture and sod | 535 | 204,808 | 3 | 9.0 |
| Milk from cows | 463 | 187,497 | 4 | 8.3 |
| | | | | |
| Vegetables, melons, potatoes, and sweet potatoes | 797 | 70,711 | 5 | 3.1 |
| Cattle and calves | 2,663 | 69,917 | 6 | 3.1 |
| Other crops and hay | 2,507 | 35,806 | 7 | 1.6 |
| Fruits, tree nuts, and berries | 476 | 20,065 | 8 | 0.9 |
| | | | | |
| Horses, ponies, mules, burros, and donkeys | 661 | 13,188 | 9 | 0.6 |
| Hogs and pigs | 340 | (D) | 10 | |
| Aquaculture | 25 | 9,011 | 11 | 0.4 |
| Other animals and other animal products | 353 | (D) | 12 | (D) |
| | | | | |
| Sheep, goats, wool, mohair, and milk | 795 | (D) | 13 | (D) |
| Cut Christmas trees and short rotation woody crops (See 2012 Census for full description) | 151 | 1,792 | 14 | 0.1 |
| Tobacco | 43 | 1,026 | 15 | (Z) |
| Cotton and cottonseed | - | - | - | - |

# WHERE'S FARMING HEADED?

↑ Poultry/grains, Nursery/Horticulture, Emerging Local & Direct Market Opportunities

↓ Industrial livestock/ large scale commodities in fragmented landscapes

- Environmental Regs: Industry holding its own
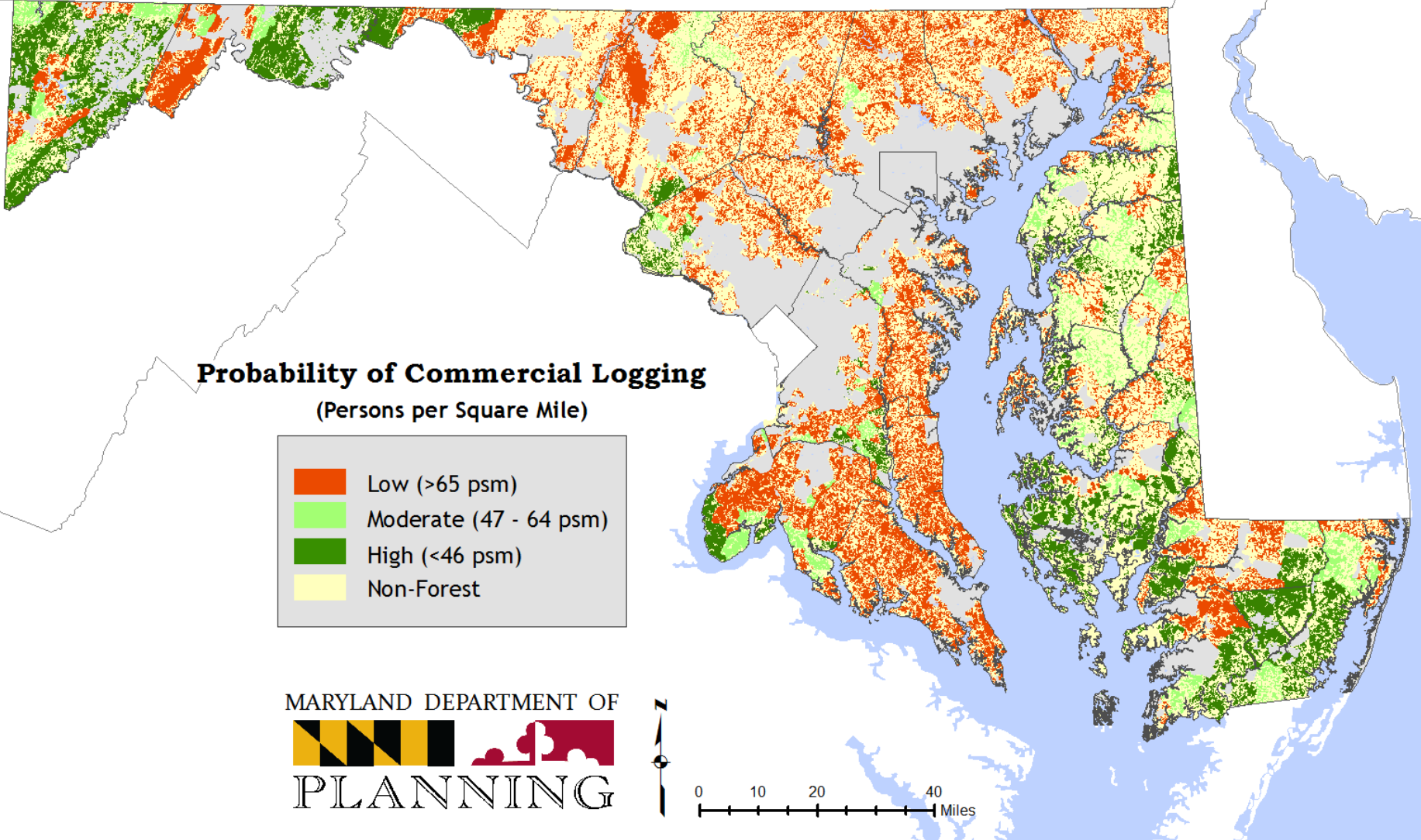- LU/ SG Policies: Helping, but not enough

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## MD Forestry 1914 - 2013

MD Forestry 2013
▬ same acres
▲ greater annual production
▲ more standing timber
▬ similar harvest
▼ but very low % annual prod
▲ MD Manufacturers 20% self sufficient
▼ fewer mills, mfg plants

- Resource fragmentation
- 80% private, 8 of 10 < 10 Ac
- Neighbors say no
- Harvesting, permitting more difficult
- Unreliable supply chain
- Local markets shrink



# MDP
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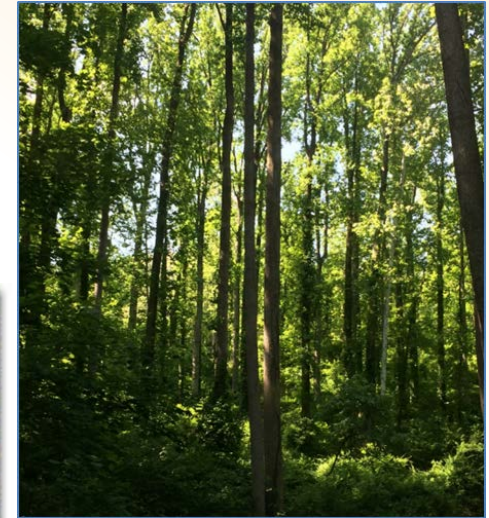
# 2010 Population Density as Indicator of Probability of Commercial Logging



**Probability of Commercial Logging**

(Persons per Square Mile)

- Low (>65 psm)
- Moderate (47 - 64 psm)
- High (<46 psm)
- Non-Forest

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0    10    20    40 Miles

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# WHERE'S FORESTRY HEADED?

⬆ Land locked, fragmented supply

⬆ Constrained by owners, neighbors, sediment/erosion control, market access

⬇ Fewer mills, manufacturers

⬇ Erosion of incentives for industry, investment

➡ Unfortunate confluence of land use & environmental policies

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# CAN POLICY HELP? PRIORITIES:

- Improve preservation
- Enable Private Investment with Predictable Outcomes
- Minimize Conflicts through Purposefully Planned Communities
- Evaluate & Reduce Obstacles to Local Foods
- Simplify Logging on Small Woodlots
- Expand Access to Green Building Markets
- Strategic Planning Efforts, both industries

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# WHAT MIGHT THE COMMISSION DO?

Ask Rural Economies Work Group, its Subcommittees to

- Consider findings & recommendations
- Recommend actions to full Commission

Consider collaboration with agencies, interests, associations to support economic development through these industries

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