

Land Use Policy and Planning for Farming

Funded by:



Commissioned by:



Prepared by:



Transforming Open Space to Sustainable Farm Enterprises

The Purpose of the study is to:

- Increase local food production and promote open space conservation
- Identify key issues that either threaten or support sustainable farm enterprises
- Use results of the study to inform municipal officials and land trust professionals about the opportunities and benefits of promoting sustainable food production on protected lands in southeastern Pennsylvania where appropriate



Primary Project Goals

- Make preserved open space available for sustainable farm enterprises
- Focus on promotion of sustainable farm enterprises
- Develop recommendations and policies
- Create tools and methodologies for municipalities, counties & conservancies to reach goals

Secondary or Implied Goals

- Better access to healthy food
- Economic development
- Environmental remediation
- Community greening
- Community building
- Connect farmers to farms (land)
- Use sustainable farm enterprises to help preserve land



Transforming Open Space to Sustainable Farm Enterprises

A Few Basic Facts.....

The number of farms and farmers is declining....

The average age of farmers is old and getting older....

The Buy Fresh / Buy Local movement is growing....

Food production & distribution remains:

- Centralized
- Removed from most people
- Vulnerable
- Inequitable

Most new farms are 50 acres or less.....

Young farmers lack capital to purchase land.....



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General Concepts – identifying obstacles and opportunities

- Make farmland available to farmers
- Make sure open space easements do not inhibit farming (plain speak)
- Examine how zoning ordinances can help allow / encourage farming
- Understand obstacles that farmers face in the Philadelphia region
- Consider farming from a systems approach, i.e. external factors that help make farming viable - such as:
 - Distribution system (delivery, pick-your-own, CSA pick-up, traditional)
 - Zero waste streams – composting (local sources to local farms)
 - Audience (consumers) – public, restaurants, farmers markets, supermarkets
 - Equipment – where and how to get the tools and supplies farmers need
 - Nuisance factors – limited spraying, slow moving vehicles on roads, dust, odors, visual “intrusions” into open space, perceptions of farm workers, traffic from pick-ups / pick-your-owns, ancillary uses (mazes, hay rides, seasonal displays)



Mapping Data - Areas Examined

Public Open Space:

- Municipalities, Cities, Boroughs, Townships and State open spaces



Quasi-Public Open Space:

- Non-profit open space lands
- Public utility entities with overhead power line corridors (added during study)



City of Philadelphia Vacant Lands:

- Philadelphia Housing Development Corporation (PHDC)
- Philadelphia Redevelopment Authority (RDA)
- Department of Public Property (PUB)

Not Included (reason):

- Federal Lands (constrained by funding, cultural resources, comparative land area)
- Preserved Farms (these are already used for agriculture)



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Mapping Data - Constraints Subtracted:



Constraints subtracted from Open Space:

- Important habitat areas (smart conservation areas- DVRPC)
- Flood prone areas (floodway and 100-year flood plain)
- Steep slopes greater than 15%
- Wooded areas
- Parking
- Active recreation areas

Additional considerations:

- Assume that on average 15-30% of the non-constrained land could be used for sustainable farm enterprises since some portion of “non-constrained” areas will not be farmed due to regulatory issues, physical constraints or lack of political will.



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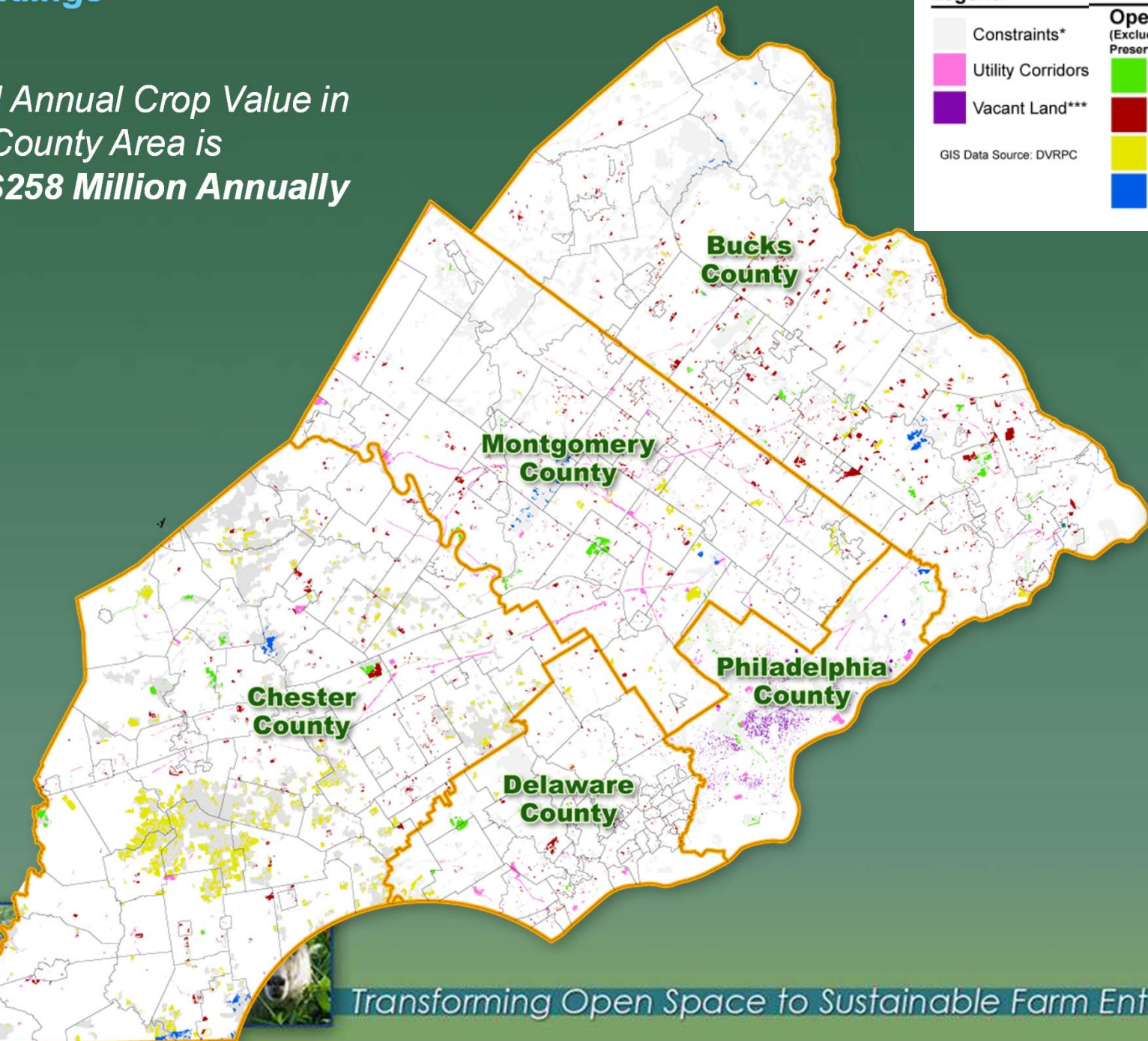
Major Findings

- potential Annual Crop Value in the Five County Area is \$155 to \$258 Million Annually

Legend

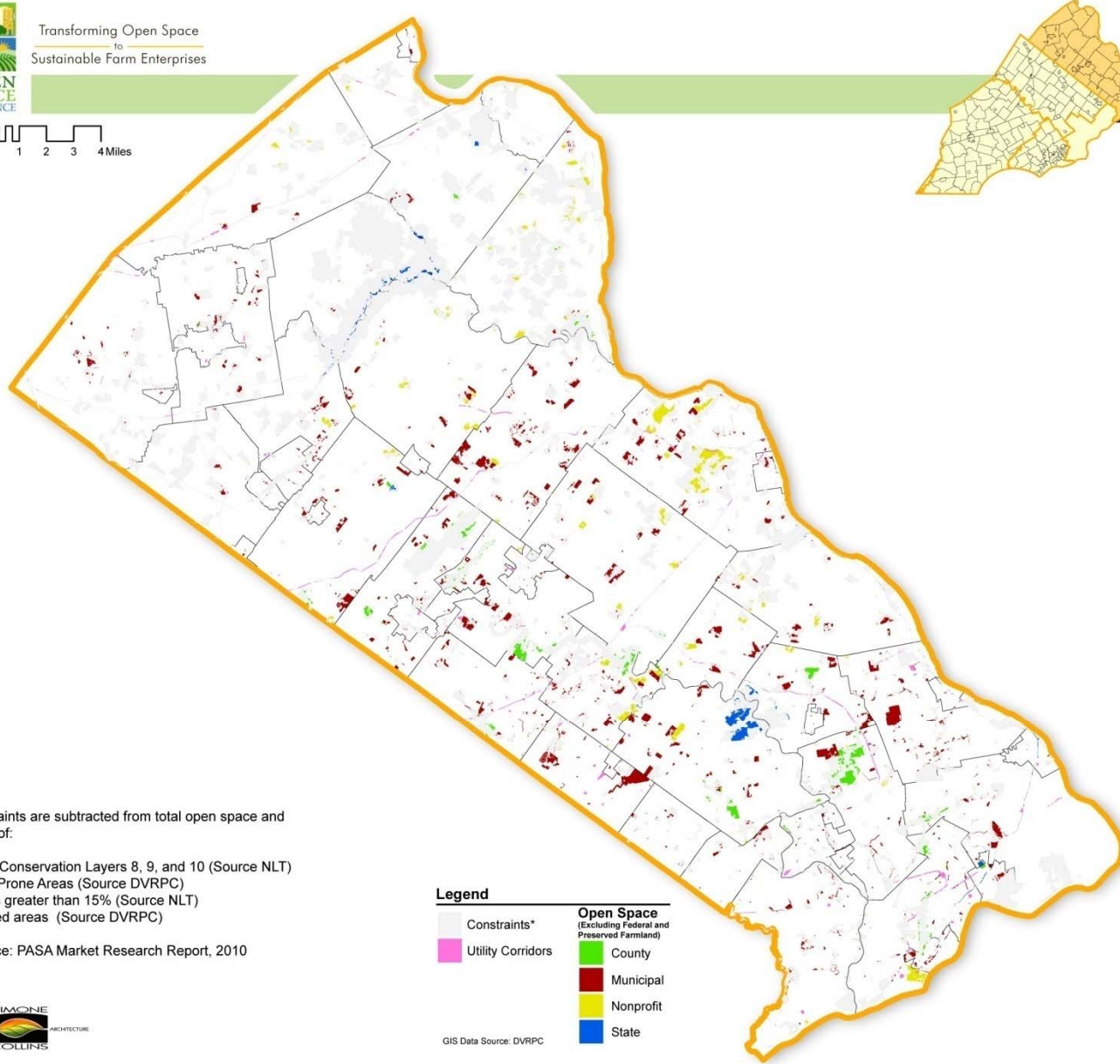
Constraints*	Open Space (Excluding Federal and Preserved Farmland)
Utility Corridors	County
Vacant Land***	Municipal
	Nonprofit
	State

GIS Data Source: DVRPC



Transforming Open Space to Sustainable Farm Enterprises

Potential Annual Economic Value in Bucks County: \$36.9 to \$61.5 Million



*Constraints are subtracted from total open space and consist of:

- Smart Conservation Layers 8, 9, and 10 (Source NLT)
- Flood Prone Areas (Source DVRPC)
- Slopes greater than 15% (Source NLT)
- Wooded areas (Source DVRPC)

** Source: PASA Market Research Report, 2010



Legend

Constraints*	Open Space (Excluding Federal and Preserved Farmland)
Utility Corridors	County
	Municipal
	Nonprofit
	State

GIS Data Source: DVRPC

Potential Economic Value Bucks County

Open Space

	Total Open Space:	56,968.16	ACRES
	Total Constraints*:	47,190.15	
	Total Open Space Suitable for Sustainable Agriculture:	9,778.04	

\$

If only 30% of these lands are utilized.

Potential Economic Value in Bucks County	VALUE Low to High	AMOUNT
		\$35.2 Million
		\$58.7 Million

(\$12,000/Acre to \$20,000/Acre Annually)**

Utility Land

	Total Utility Lands:	3,967.98	ACRES
	Total Constraints*:	3,040.88	
	Total Utility Land Suitable for Sustainable Agriculture:	927.10	

\$

If only 15% of these lands are utilized.

Potential Economic Value in Bucks County	VALUE Low to High	AMOUNT
		\$1.7 Million
		\$2.8 Million

(\$12,000/Acre to \$20,000/Acre Annually)**

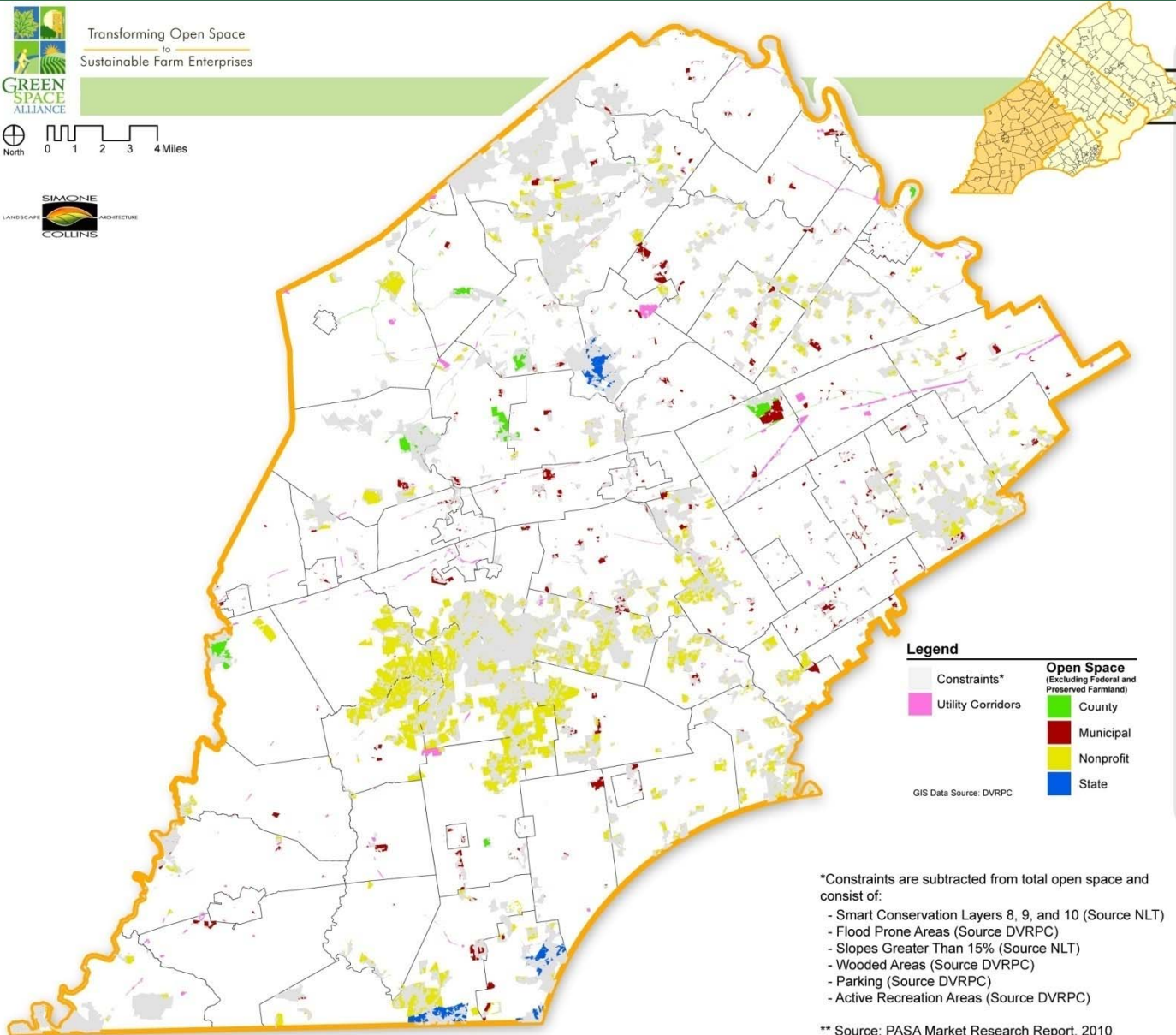
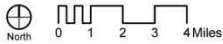
Total Potential Economic Value in Bucks County
(Open Space Combined With Utility Land)

\$36.9 Million to \$61.5 Million Annually.

Total

Potential Annual Economic Value in Chester County: \$77.3 to \$128.9 Million

Transforming Open Space
to
Sustainable Farm Enterprises



Legend

Constraints*	Open Space (Excluding Federal and Preserved Farmland)
Utility Corridors	County
	Nonprofit
	State

GIS Data Source: DVRPC

*Constraints are subtracted from total open space and consist of:

- Smart Conservation Layers 8, 9, and 10 (Source NLT)
- Flood Prone Areas (Source DVRPC)
- Slopes Greater Than 15% (Source NLT)
- Wooded Areas (Source DVRPC)
- Parking (Source DVRPC)
- Active Recreation Areas (Source DVRPC)

** Source: PASA Market Research Report, 2010

Potential Economic Value Chester County

Open Space

	Total Open Space:	74,436.28	ACRES
	Total Constraints*:	53,692.65	
Total Open Space Suitable for Sustainable Agriculture:		20,743.63	

If only 30% of these lands are utilized.

Potential Economic Value in Chester County	VALUE	AMOUNT
	Low to High	\$74.7 Million \$124.5 Million

(\$12,000/Acre to \$20,000/Acre Annually)**

Utility Land

	Total Utility Lands:	2,260.66	ACRES
	Total Constraints*:	804.70	
Total Utility Land Suitable for Sustainable Agriculture:		1,455.96	

If only 15% of these lands are utilized.

Potential Economic Value in Chester County	VALUE	AMOUNT
	Low to High	\$2.6 Million \$4.4 Million

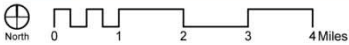
(\$12,000/Acre to \$20,000/Acre Annually)**

Total Potential Economic Value in Chester County
(Open Space Combined With Utility Land)

\$77.3 Million to \$128.9 Million Annually.

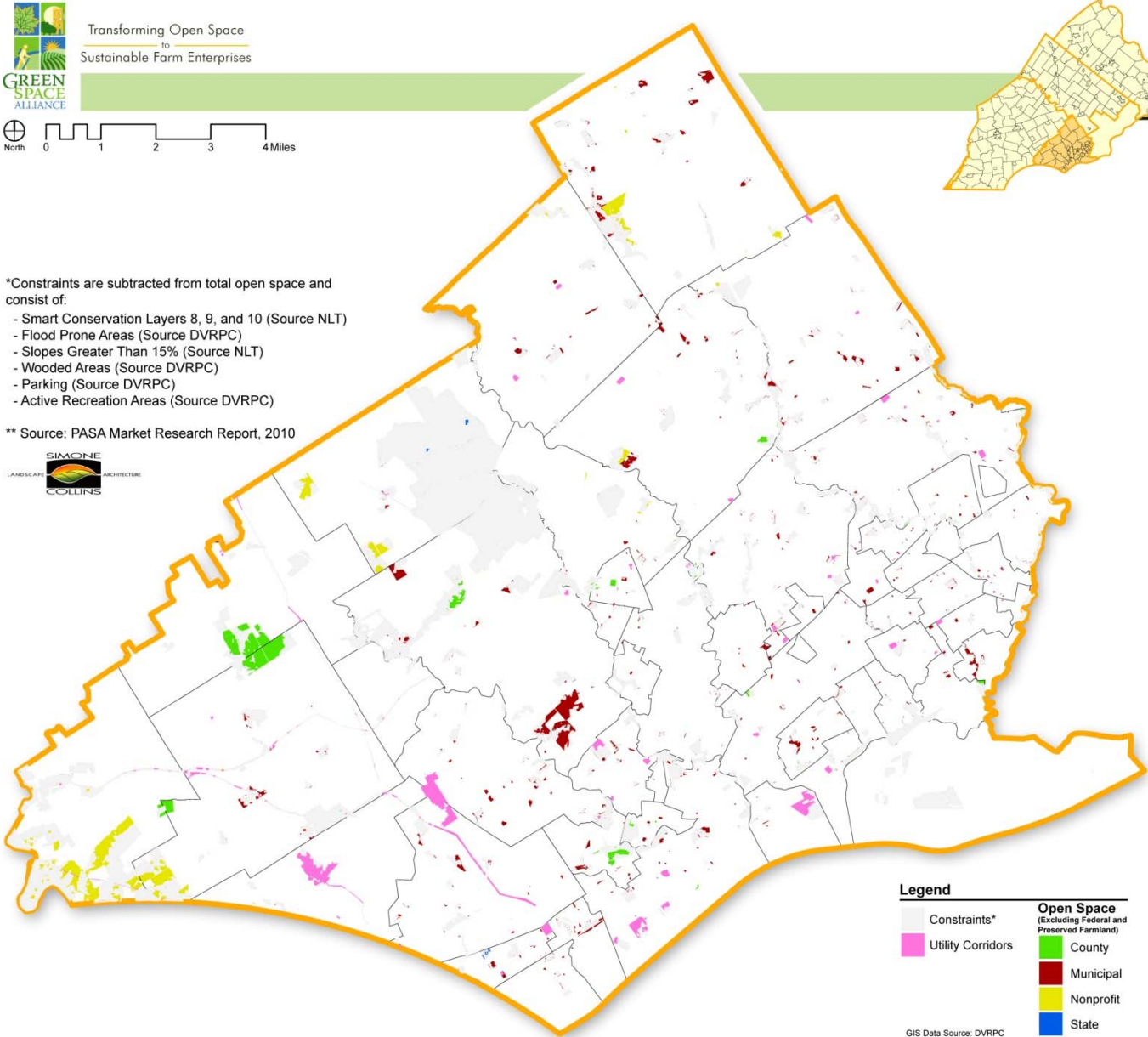
Total

Potential Annual Economic Value in Delaware County: \$7.5 to \$12.4 Million



- *Constraints are subtracted from total open space and consist of:
- Smart Conservation Layers 8, 9, and 10 (Source NLT)
 - Flood Prone Areas (Source DVRPC)
 - Slopes Greater Than 15% (Source NLT)
 - Wooded Areas (Source DVRPC)
 - Parking (Source DVRPC)
 - Active Recreation Areas (Source DVRPC)

** Source: PASA Market Research Report, 2010



Legend

Constraints*	Open Space (Excluding Federal and Preserved Farmland)
Utility Corridors	County
	Municipal
	Nonprofit
	State

GIS Data Source: DVRPC

Potential Economic Value Delaware County

Open Space

	Total Open Space:	11,954.16	ACRES
	Total Constraints*:	10,190.20	
	Total Open Space Suitable for Sustainable Agriculture:	1,763.96	

If only 30% of these lands are utilized.

Potential Economic Value in Delaware County	VALUE	AMOUNT
	Low to High	\$6.4 Million
		\$10.6 Million

(\$12,000/Acre to \$20,000/Acre Annually)**

Utility Land

	Total Utility Lands:	1,016.45	ACRES
	Total Constraints*:	424.20	
	Total Utility Land Suitable for Sustainable Agriculture:	592.25	

If only 15% of these lands are utilized.

Potential Economic Value in Delaware County	VALUE	AMOUNT
	Low to High	\$1.1 Million
		\$1.8 Million

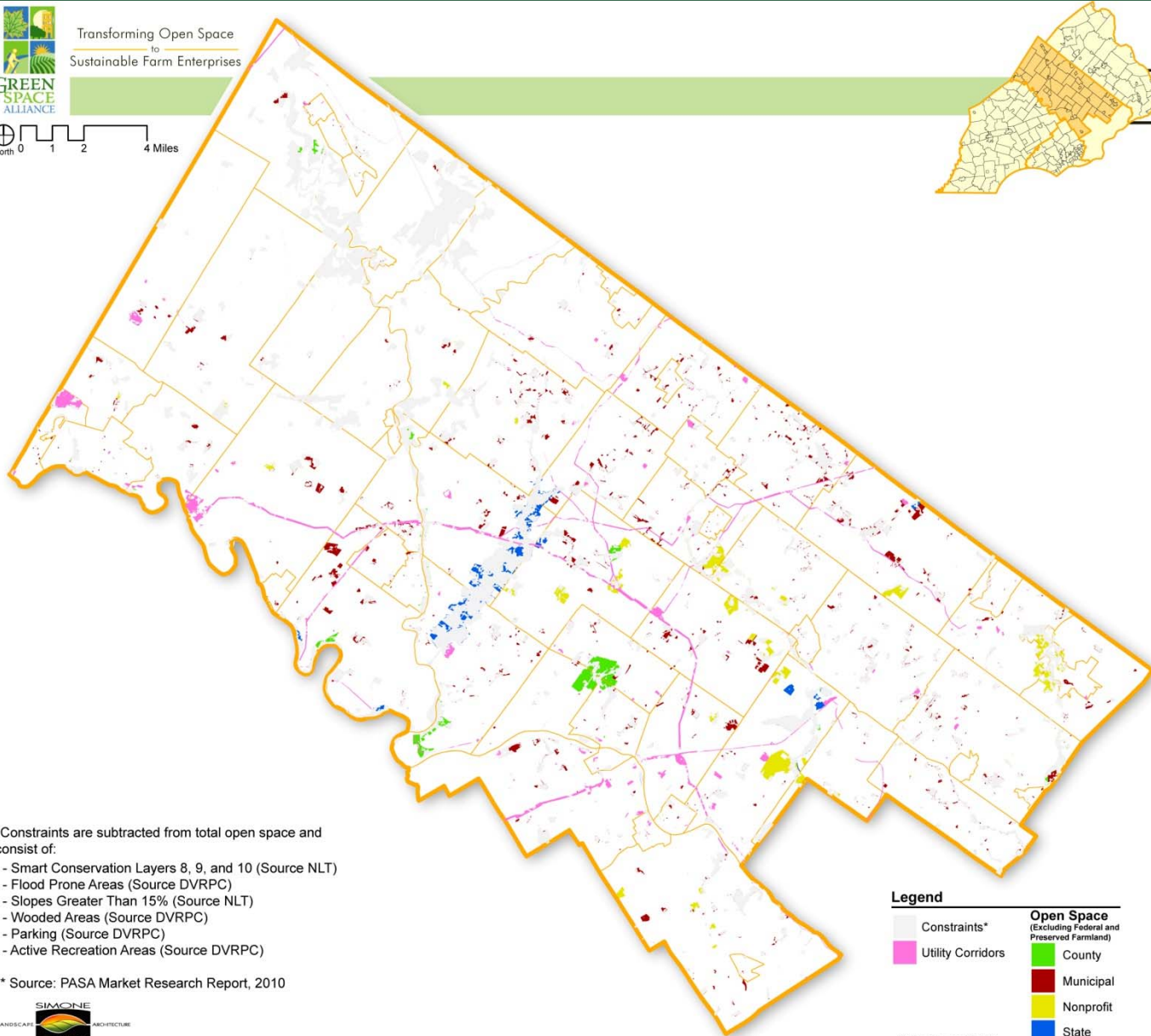
(\$12,000/Acre to \$20,000/Acre Annually)**

Total Potential Economic Value in Delaware County
(Open Space Combined With Utility Land)

\$7.5 Million to \$12.4 Million Annually.

Total

Potential Annual Economic Value in Montgomery County: \$26.4 to \$43.9 Million



*Constraints are subtracted from total open space and consist of:

- Smart Conservation Layers 8, 9, and 10 (Source NLT)
- Flood Prone Areas (Source DVRPC)
- Slopes Greater Than 15% (Source NLT)
- Wooded Areas (Source DVRPC)
- Parking (Source DVRPC)
- Active Recreation Areas (Source DVRPC)

** Source: PASA Market Research Report, 2010



Legend

Constraints*	Open Space (Excluding Federal and Preserved Farmland)
Utility Corridors	County
	Nonprofit
	State

GIS Data Source: DVRPC

Potential Economic Value Montgomery County

Open Space

	Total Open Space:	27,908.95	ACRES
	Total Constraints*:	21,973.88	
	Total Open Space Suitable for Sustainable Agriculture:	5,935.07	

If only 30% of these lands are utilized.

	VALUE	AMOUNT
Potential Economic Value in Montgomery County	Low to High	\$21.4 Million \$35.6 Million
		(\$12,000/Acre to \$20,000/Acre Annually)**

Utility Land

	Total Utility Lands:	3,987.73	ACRES
	Total Constraints*:	1,228.28	
	Total Utility Land Suitable for Sustainable Agriculture:	2,759.45	

If only 15% of these lands are utilized.

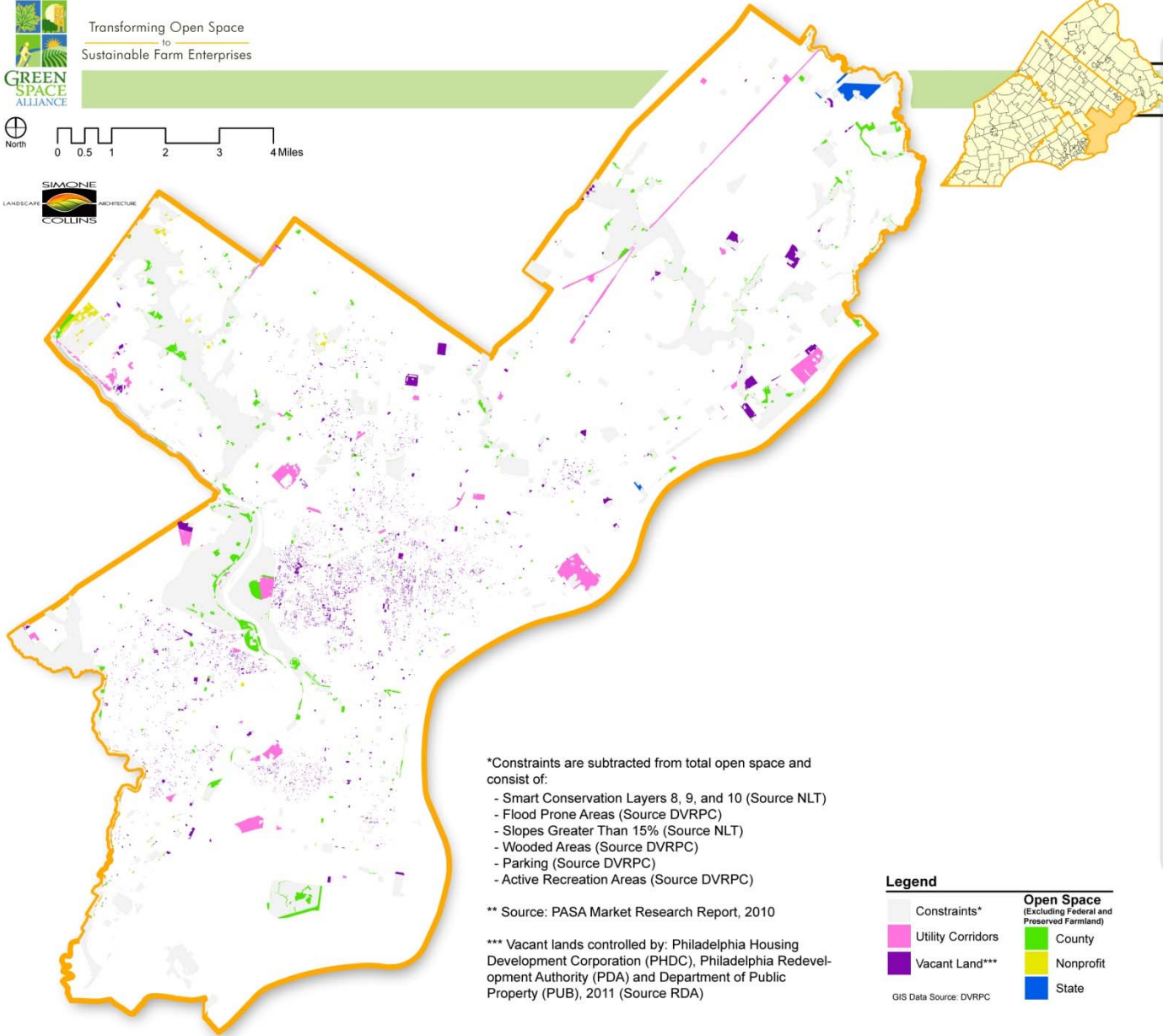
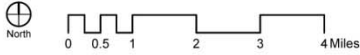
	VALUE	AMOUNT
Potential Economic Value in Montgomery County	Low to High	\$5.0 Million \$8.3 Million
		(\$12,000/Acre to \$20,000/Acre Annually)**

Total Potential Economic Value in Montgomery County
(Open Space Combined With Utility Land)

\$26.4 Million to \$43.9 Million Annually.

Total

Potential Annual Economic Value in Philadelphia County: \$6.4 to \$10.8 Million



*Constraints are subtracted from total open space and consist of:
 - Smart Conservation Layers 8, 9, and 10 (Source NLT)
 - Flood Prone Areas (Source DVRPC)
 - Slopes Greater Than 15% (Source NLT)
 - Wooded Areas (Source DVRPC)
 - Parking (Source DVRPC)
 - Active Recreation Areas (Source DVRPC)

** Source: PASA Market Research Report, 2010
 *** Vacant lands controlled by: Philadelphia Housing Development Corporation (PHDC), Philadelphia Redevelopment Authority (PDA) and Department of Public Property (PUB), 2011 (Source RDA)

Legend

Constraints*	Open Space (Excluding Federal and Preserved Farmland)
Utility Corridors	County
Vacant Land***	Nonprofit
	State

GIS Data Source: DVRPC

Potential Economic Value Philadelphia County

Open Space

Total Open Space:	ACRES	10,660.67
Total Constraints*:	ACRES	9,536.93
Total Open Space Suitable for Sustainable Agriculture: 1,123.74		

If only 30% of these lands are utilized.

Potential Economic Value in Philadelphia County	VALUE	AMOUNT
	Low to High	\$4.0 Million
		\$6.7 Million

(\$12,000/Acre to \$20,000/Acre Annually)**

Utility Land

Total Utility Lands:	ACRES	1,113.86
Total Constraints*:	ACRES	266.87
Total Utility Land Suitable for Sustainable Agriculture: 846.99		

If only 15% of these lands are utilized.

Potential Economic Value in Philadelphia County	VALUE	AMOUNT
	Low to High	\$1.5 Million
		\$2.5 Million

(\$12,000/Acre to \$20,000/Acre Annually)**

Vacant Land

Total Vacant Lands***:	ACRES	1,848.48
Total Constraints*:	ACRES	1,324.29
Total Vacant Land Suitable for Sustainable Agriculture: 524.19		

If only 15% of these lands are utilized.

Potential Economic Value in Philadelphia County	VALUE	AMOUNT
	Low to High	\$0.9 Million
		\$1.6 Million

(\$12,000/Acre to \$20,000/Acre Annually)**

(\$12,000/Acre to \$20,000/Acre Annually)**

Total Potential Economic Value in Philadelphia County
(Open Space Combined With Utility and Vacant Land)
\$6.4 Million to \$10.8 Million Annually.

Total

Major Findings:

- ***Most open space properties acquired through county funding sources permit sustainable farm enterprises.***
- ***Funding sources from federal LWCF and / or state DCNR come with use restrictions that pose major challenges to allowing sustainable farm enterprises.***
- ***Even if funding source restrictions are lifted, local zoning will often inhibit sustainable farm enterprises.***
- ***Municipalities are hesitant to allow sustainable farm enterprises due to a lack of understanding about these uses.***
- ***There is a general lack of awareness of the need for land to meet demand for locally produced food.***



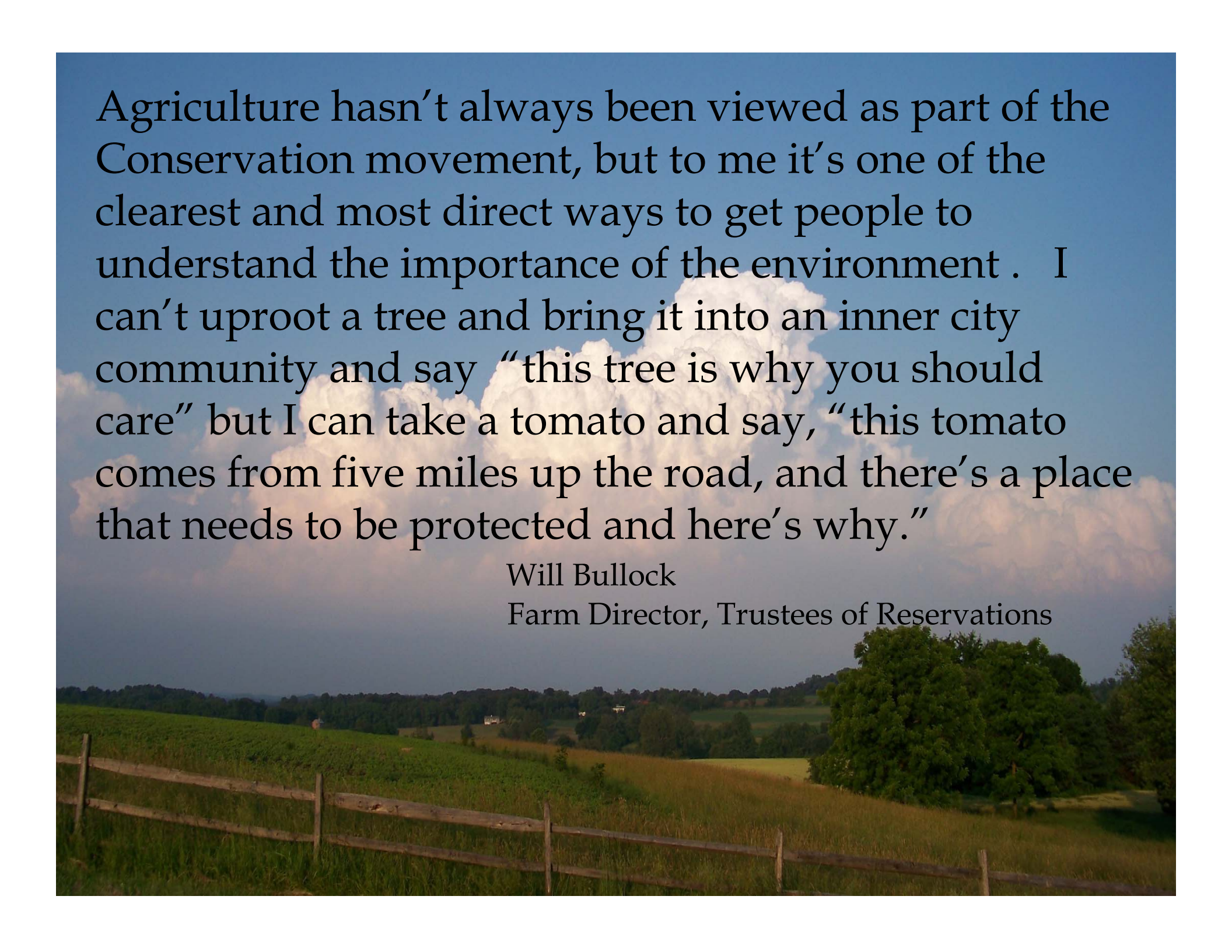
Major Recommendations:

Planning and Zoning:

- Generally, create county and municipal Comprehensive Plan goals and strategies to encourage sustainable farm enterprises in more locations.
- Revise and enhance municipal zoning ordinances to:
 - **Create specific definitions** for sustainable farm enterprises;
 - Permit sustainable farm enterprises in **more municipal zoning districts**;
 - **Create area, bulk, setback, buffer** and other standards for sustainable farm enterprises;
 - **Create standards** for parking, waste storage and removal, hours of operation and farm management plans specific to sustainable farming enterprises; and,
 - **Allow specific ancillary and related uses** to sustainable farm enterprises that fit within community goals. These ancillary uses include but are not limited to farm sales stands, farmers markets, farm structures, infrastructure, etc.



Transforming Open Space to Sustainable Farm Enterprises



Agriculture hasn't always been viewed as part of the Conservation movement, but to me it's one of the clearest and most direct ways to get people to understand the importance of the environment . I can't uproot a tree and bring it into an inner city community and say "this tree is why you should care" but I can take a tomato and say, "this tomato comes from five miles up the road, and there's a place that needs to be protected and here's why."

Will Bullock

Farm Director, Trustees of Reservations



Pennsylvania Association for Sustainable Agriculture



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Growing is Better Than Mowing: New Farmers on Leased Lands



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Farm Lease Connection

Growing Sustainable Farm Enterprises

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Connecting People to the Land



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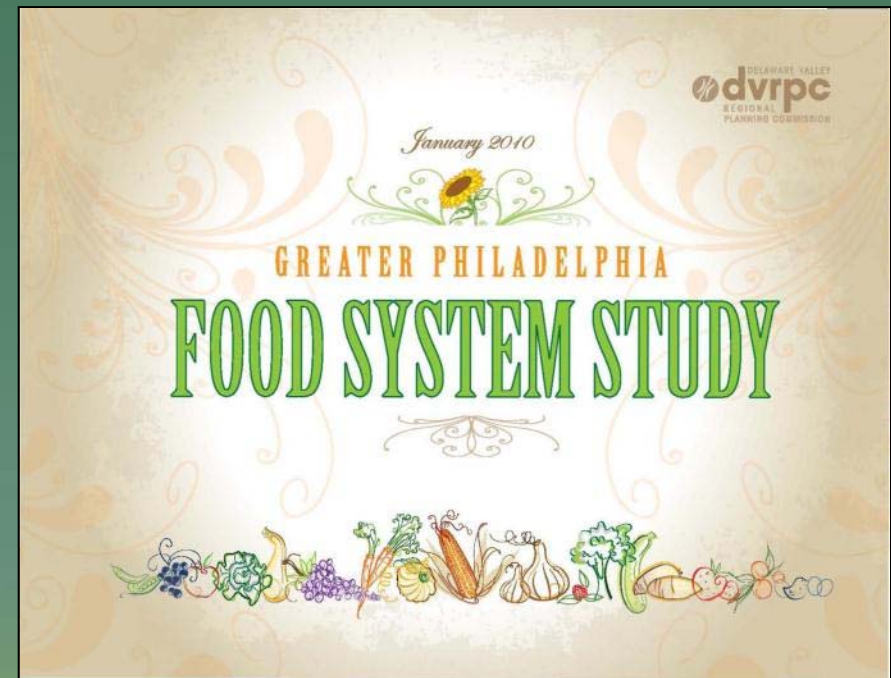
Training Future Farmers



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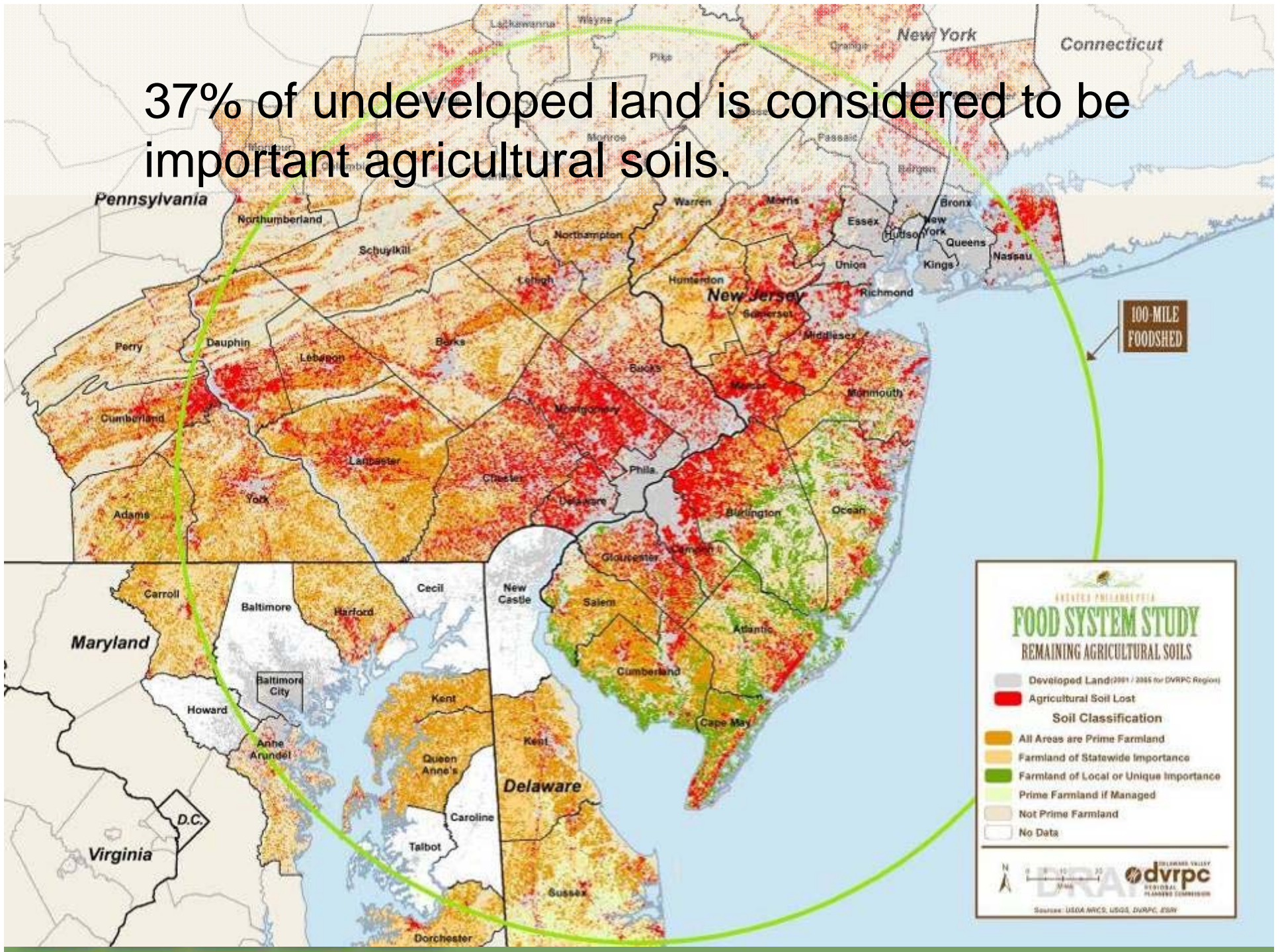
DVRPC's Regional Food System Planning

- In September 2007, DVRPC Board identified food system issues as a research/planning interest
- Intersection of Transportation, Land Use, Economic Development, Environment, and Equity
- 2010 Food System Study
- 2011 Food System Plan
- Undertaking smaller projects
 - Camden Food Economy Strategy
 - Beginning Farmer Financing



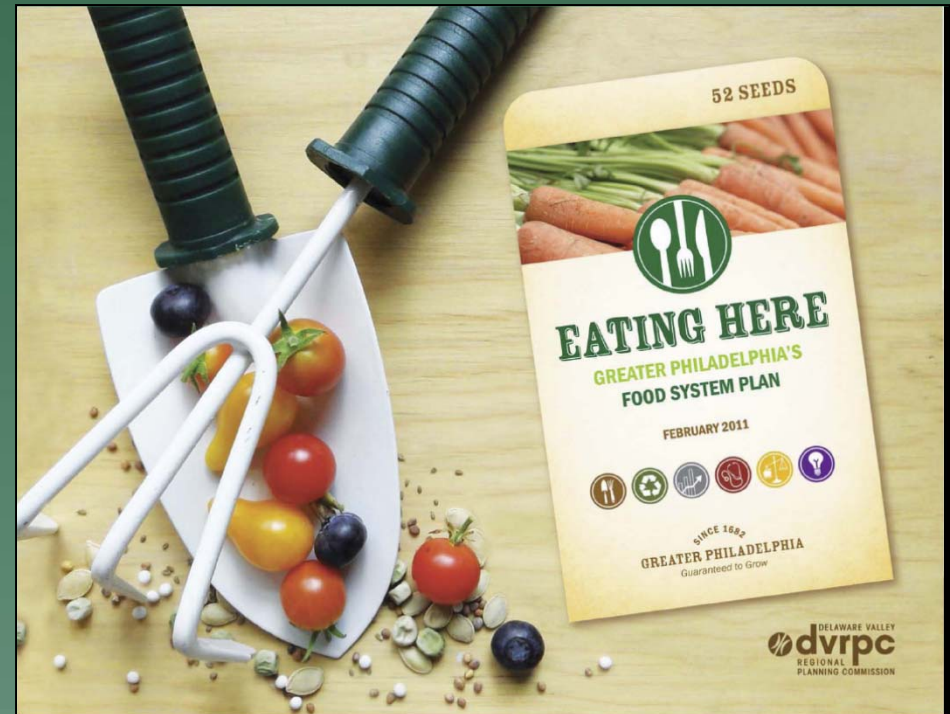
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37% of undeveloped land is considered to be important agricultural soils.



DVRPC's Interest in Financing & Farms

- 2011 Plan identified 6 themes, two of which relate to farmland & farmers
- Selected recommendations:
 - **Affordable Farmland** – Maintain affordable land for farmers
 - **Access to Capital** – Encourage more institutions to lend to agricultural and food businesses.
 - **State Farm Link Programs** – Expand programs that match interested farmers with interested landowners or retiring farmers.



Transforming Open Space to Sustainable Farm Enterprises

Who is a Farmer (in Greater Philadelphia)

- Only 47.8% of all principal operators are “full-time” farmers
- Over 77% of all farmers own all or part of the land they farm
- \$106,000 – Average sales per farm (9-county region)
- \$102,000 – Average expenses per farm (9-county region)

(Source: USDA 2007 Census of Agriculture)



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What's so special about Full-Time Farmers (National)

GROSS SALES OF FARM	LESS THAN \$10,000	\$10,000 TO \$249,999	\$250,000 OR MORE
Major occupation of principal operator is farming or ranching	31% of farms that gross less than \$10,000	61% of farms that gross \$10,000 to \$249,999	92% of farms that gross \$250,000 or more
Farm income	-\$6,538	\$8,601	\$154,859
Off-farm income	\$77,045	\$71,719	\$50,356

(Source: USDA 2011 Agricultural Resource Management Survey)



Transforming Open Space to Sustainable Farm Enterprises

Who is a Beginning Farmer ?

USDA defines beginning farmers and ranchers as those who have operated a farm or ranch as the principal operator for 10 years or fewer.

- 22% of all US farms operated by beginning farmers
- 49 – Ave. Age of a farmer that started farming between 1998 and 2007 (survey period)
- 78% of beginning farmers own all of the land they operate
- 61% of established farmers own all of the land they operate (i.e. some rent more land as they become more experienced or successful, or do not own land as part of their business model).
- 34% of beginning farmers list farming as primary occupation
- 45% of all farmers list farming as primary occupation



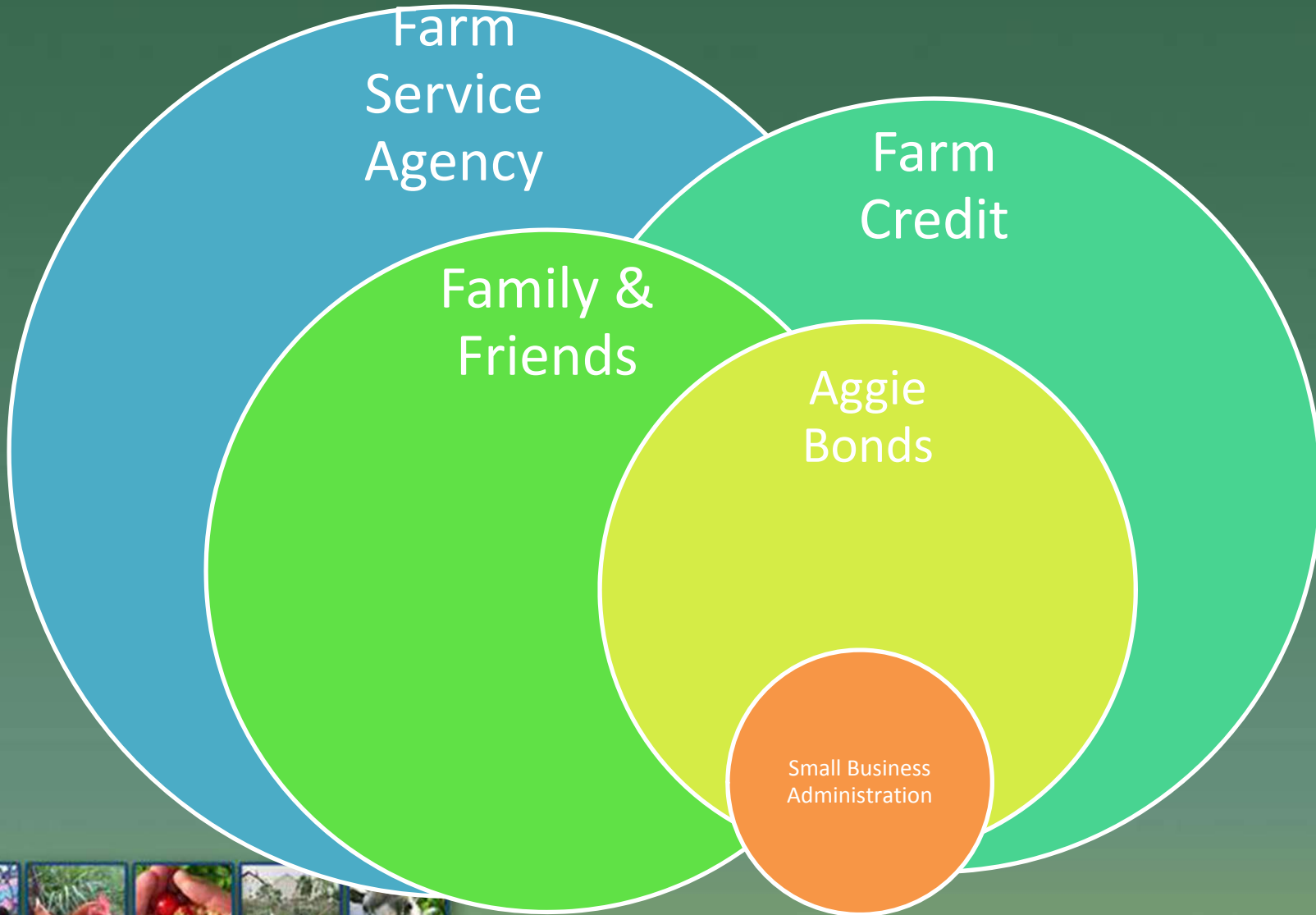
(Source: USDA 2009 Beginning Farmers and Ranchers Survey)

Why should we care about financing the next generation of farmers?

- Aging Farmers
- Decrease in mid-sized farms (more small farms, more large farms, losing “ag in the middle”)
- Food production is land intensive; land is expensive.
- More and more farmers coming from non-farm backgrounds
 - No land to inherit or buy from relatives
 - No existing business to inherit
 - No mentor
- Lack access to traditional and nontraditional capital
- Who’s going to farm all of this preserved land?

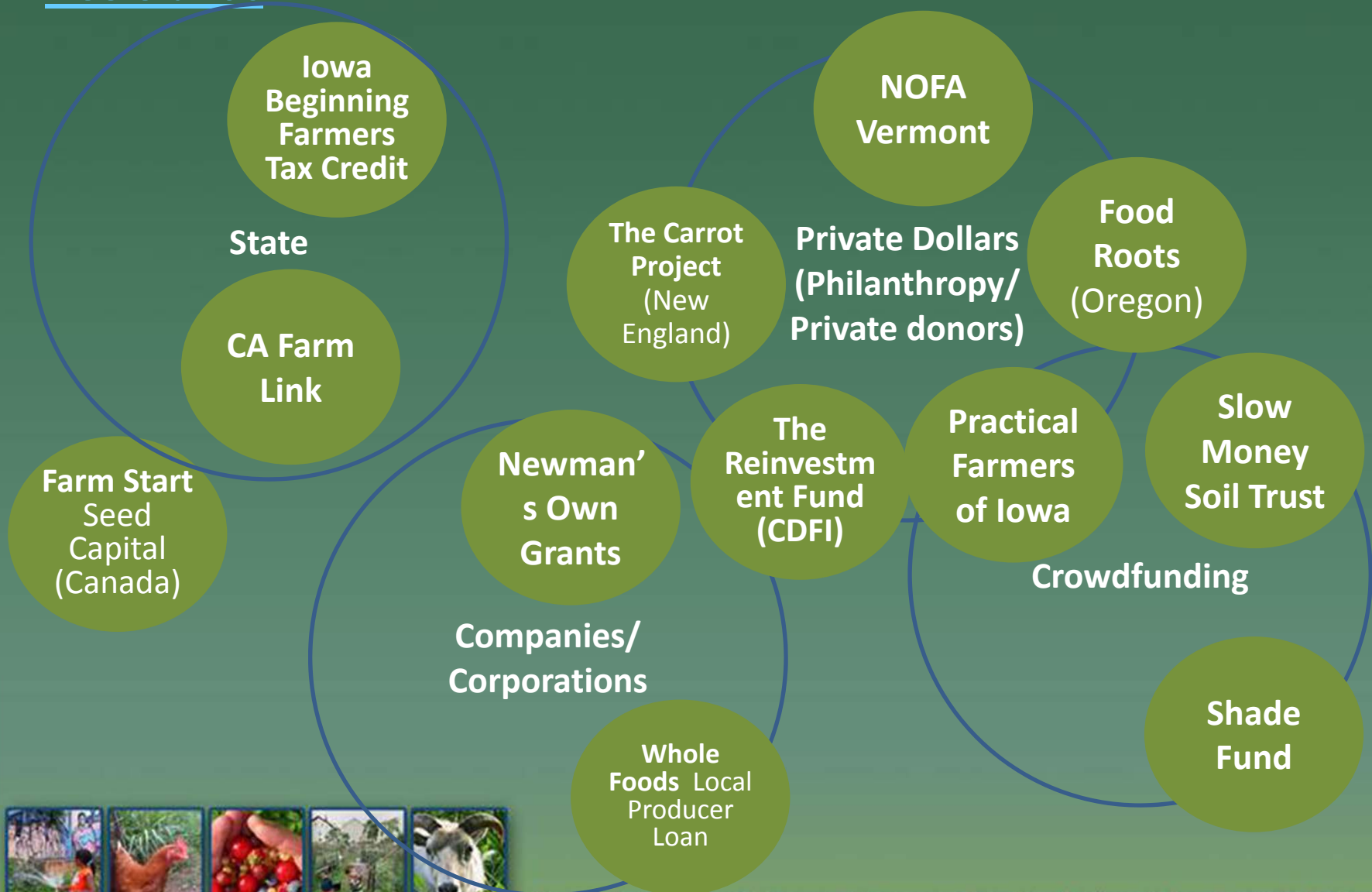


What's Out There – Traditional Financial Assistance



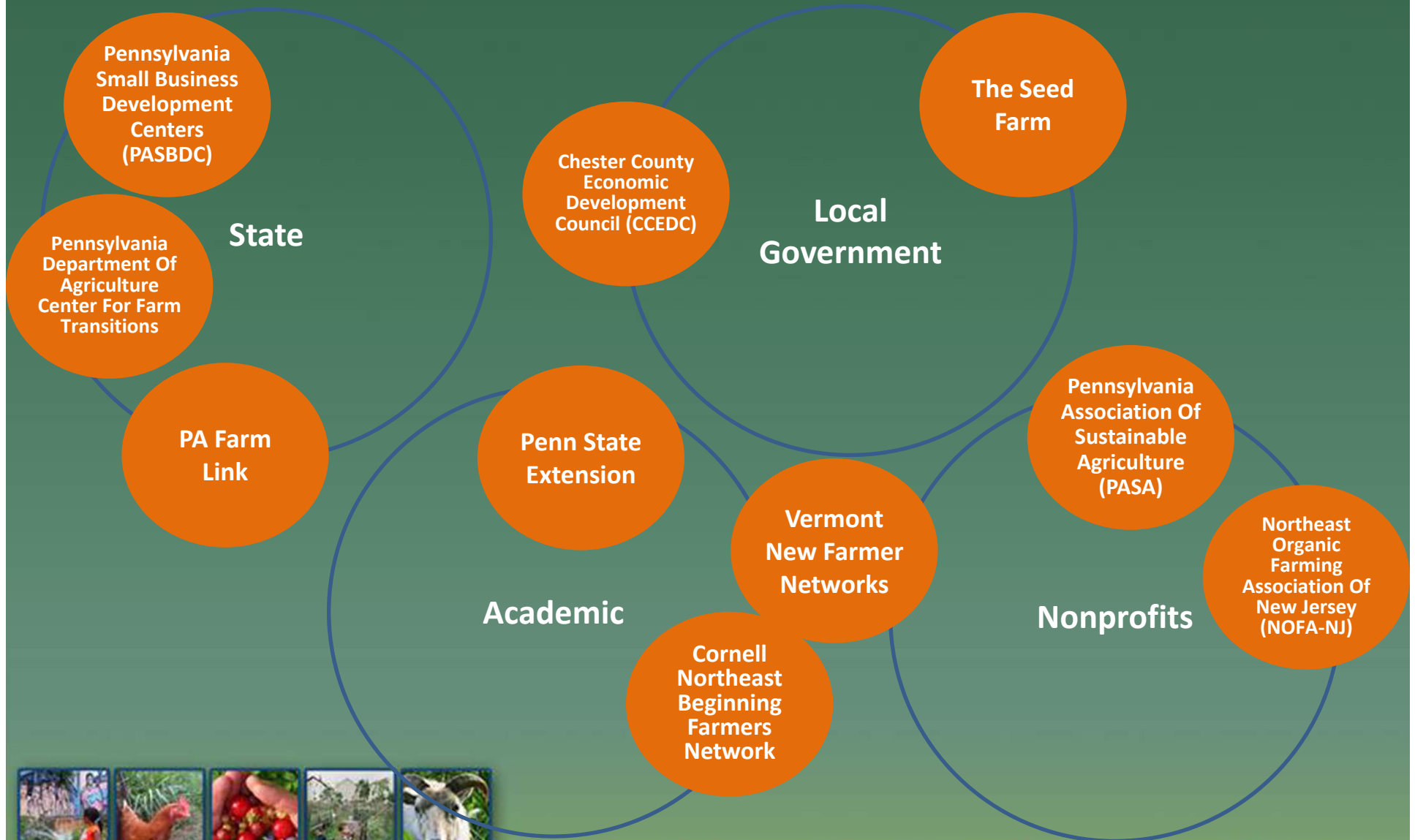
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What's Out There – Examples of Non Traditional Financial Assistance



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What's Out There – Technical Assistance



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What are the challenges to Financing New/Beginning Farmers?

- New/Beginning Farmers need help with business plans (ex. Cash flow projections)
- Hard to Finance Operating Expenses
- Difficult for financial institution to service small loans
- Farmers need more financial management knowledge and experience
- Financial institutions don't know how to work with nontraditional farmers
- Too many small financial and technical assistance programs competing for same audience and same resources



Recommendations to Improve Access to Capital

- **New/Beginning Farmers need help understanding what's already available**
- **More coordination between technical and financial assistance providers to either scale up or specialize**
 - **Opportunity for county or regional entity to coordinate private, public, and nonprofit service providers. (Ex. Chester County Ag Service Provider Mixer in January 2013)**
- **Lenders should reevaluate criteria for small and mid-sized farmers**
- **Opportunity for states to create tax credits, individual development accounts, and other tools to support new/beginning farmers**
- **Develop and support communities of practice for Financial Services, TA Providers, Beginning farmers and farm mentors**
 - **Pay farm mentors stipends**



Food



DRAFT - March, 2012

Prepared for:



**GREEN
SPACE
ALLIANCE**

Transforming Open Space to Sustainable Farm Enterprises

In Philadelphia, Delaware, Chester, Montgomery and Bucks County, Pennsylvania

Questions and Comments.....



Prepared by:



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