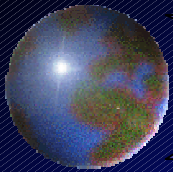


# *Planning for Agriculture in the Garden State*

*Retaining  
Our Farms and  
Our Farmers*

*March 3, 2006*

*New Jersey Farmland Preservation Summit  
Cook College Campus Center  
Rutgers University, New Brunswick*



**Legend:**

- High-Quality Farmland & High Development
- High-Quality Farmland & Low Development
- Federal & Indian Lands
- Urban Areas
- Other Lands

## American Farmland Trust National Trends

- 2 acres / minute farmland loss
- Rate of loss 51% faster in 90s
- Prime farmland rate of loss 30% faster than non-prime land
- US food increasingly in the path of development
- Wasteful land use consumes farmland faster (17% population growth from 1982 to 1997 caused urbanized land to rise 47%)

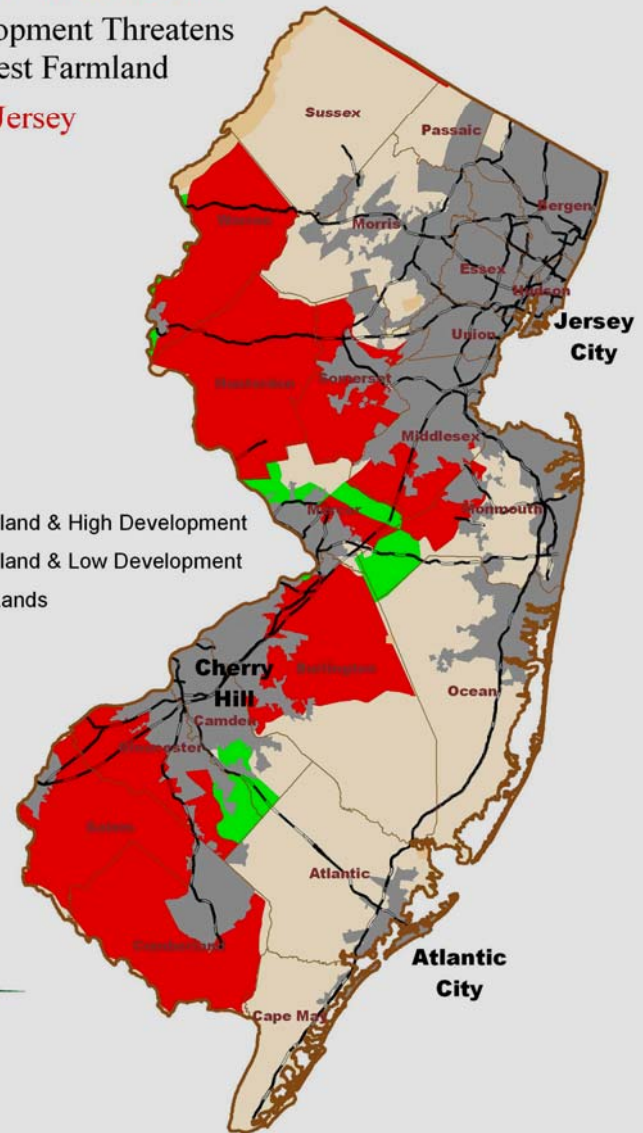
### FARMING ON THE EDGE

Sprawling Development Threatens America's Best Farmland

New Jersey

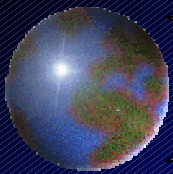
**Legend:**

- High-Quality Farmland & High Development
- High-Quality Farmland & Low Development
- Federal & Indian Lands
- Urban Areas
- Other Lands



American Farmland Trust  
www.farmland.org



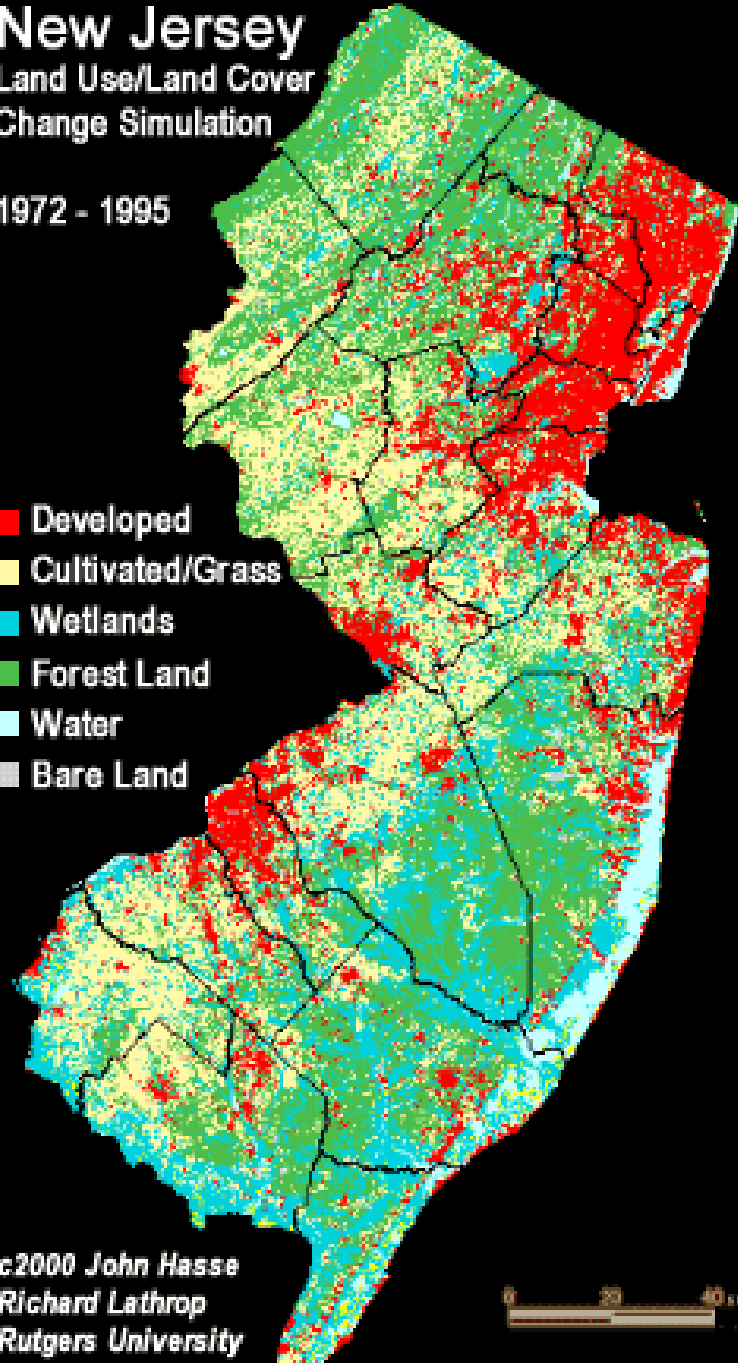


# New Jersey

Land Use/Land Cover  
Change Simulation

1972 - 1995

- Developed
- Cultivated/Grass
- Wetlands
- Forest Land
- Water
- Bare Land

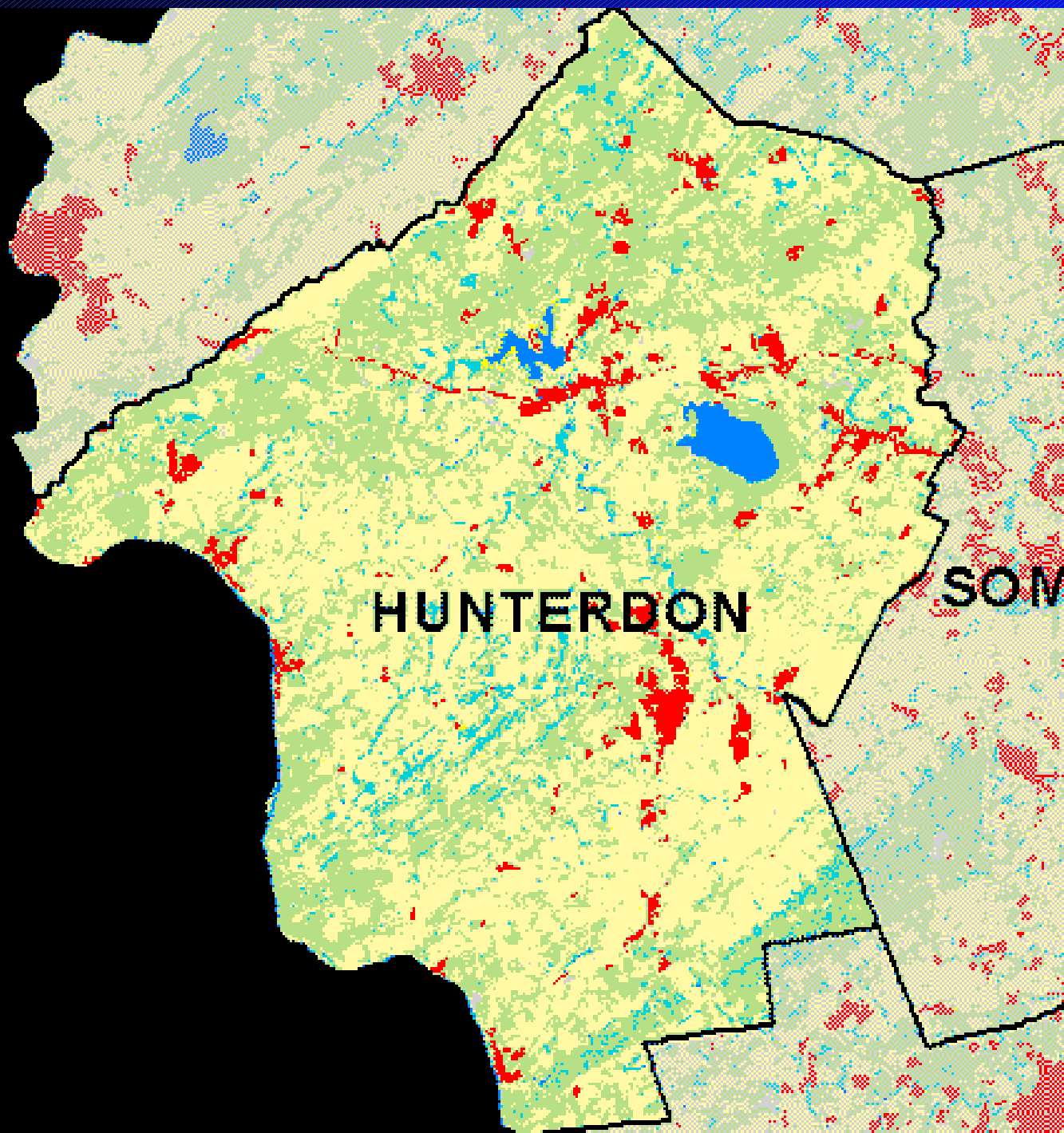


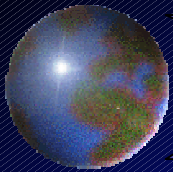
c2000 John Hesse  
Richard Lathrop  
Rutgers University  
Center for Remote Sensing & Spatial Analysis





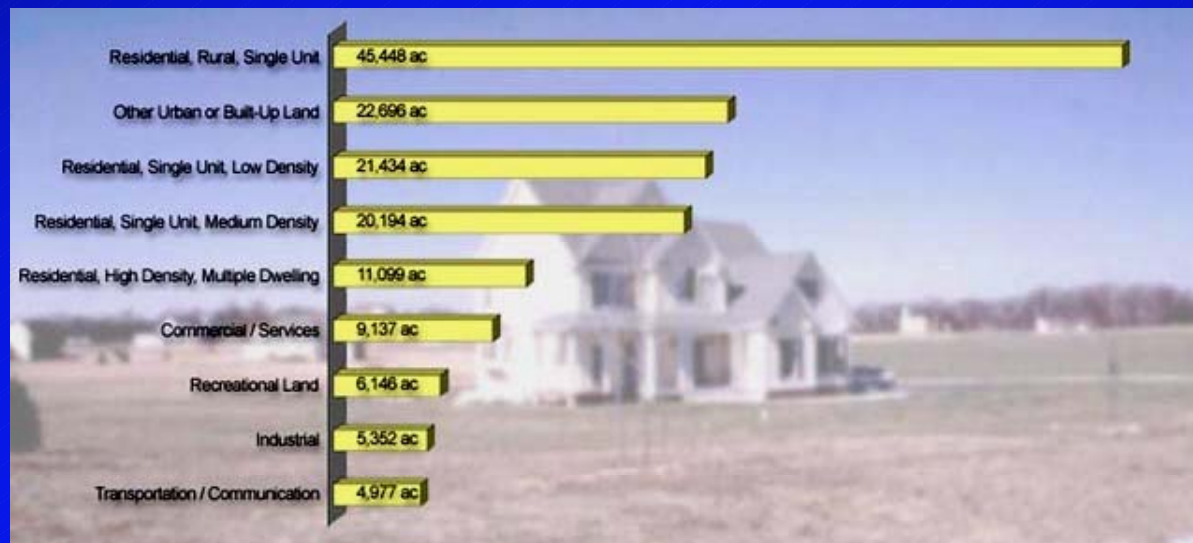
**Development  
(1972 – 1995)**



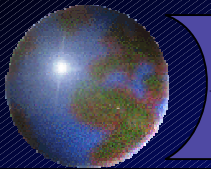


# *Large Lot Zoning Not the Answer*

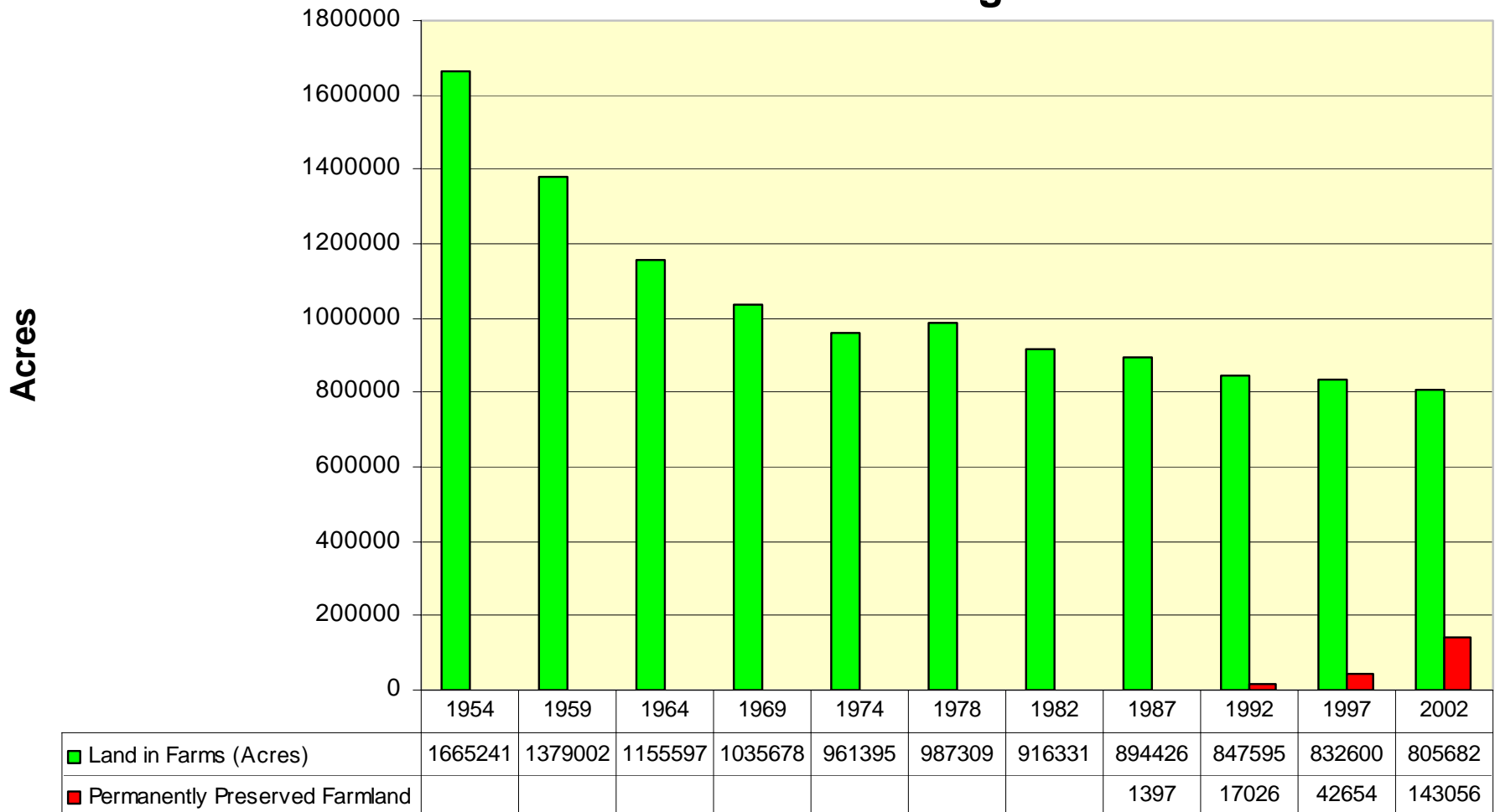
Rutgers Land Use Study  
Acres Developed 1986 – 1995  
NJDEP Land Use / Land Cover Data



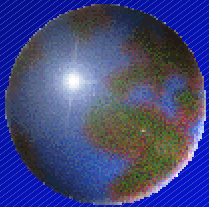




## New Jersey Land in Farms 1954 - 2002 with Preserved Farmland through 2006

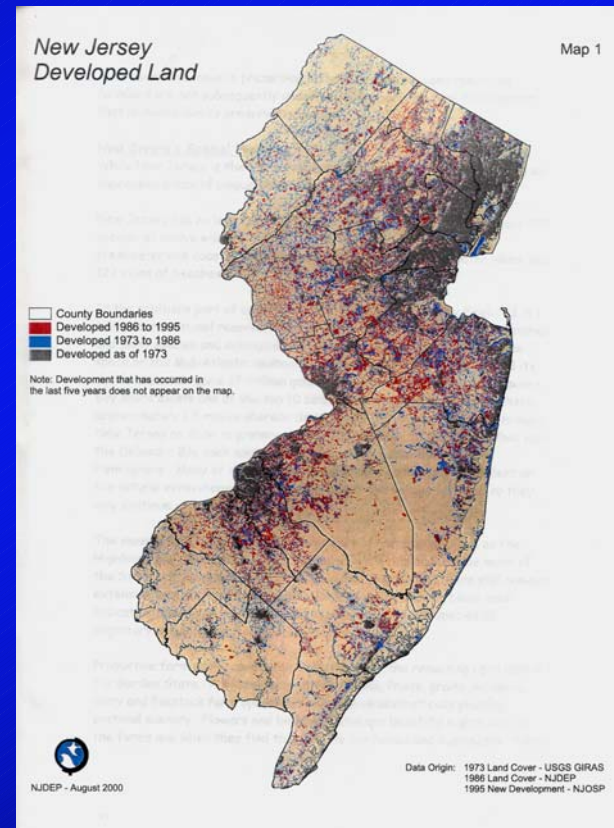


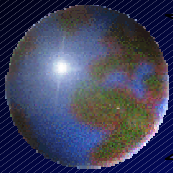
*State Agriculture Development Committee /  
County Agriculture Development Boards*



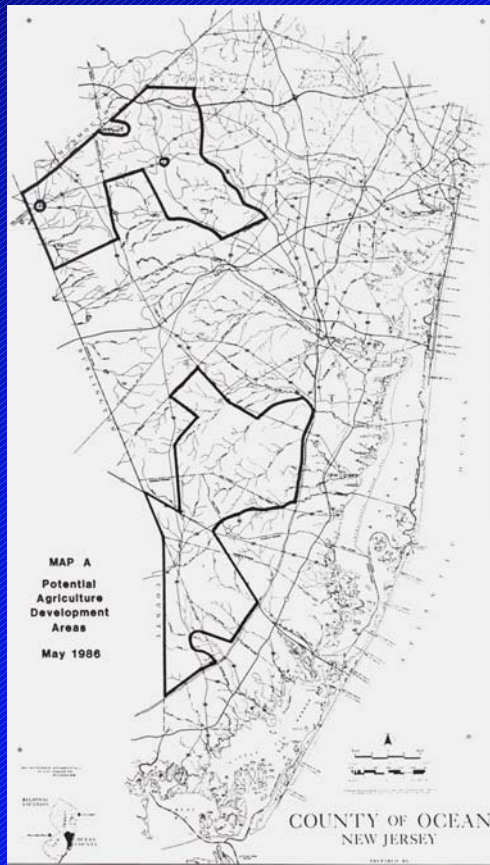
*Strategic  
Targeting  
Project*

*Preliminary Report  
March 2003*



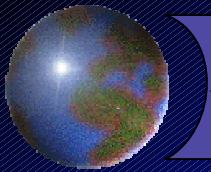


# *Background – Agricultural Development Areas (ADAs)*



- ❖ Concept of Strategic Targeting Crucial Since the Farmland Preservation Program's Inception
- ❖ Agriculture Retention and Development Act of 1983 Authorized CADB's to Identify ADAs
- ❖ 18 of NJ's 21 Counties have Designated and/or Voluntary ADAs

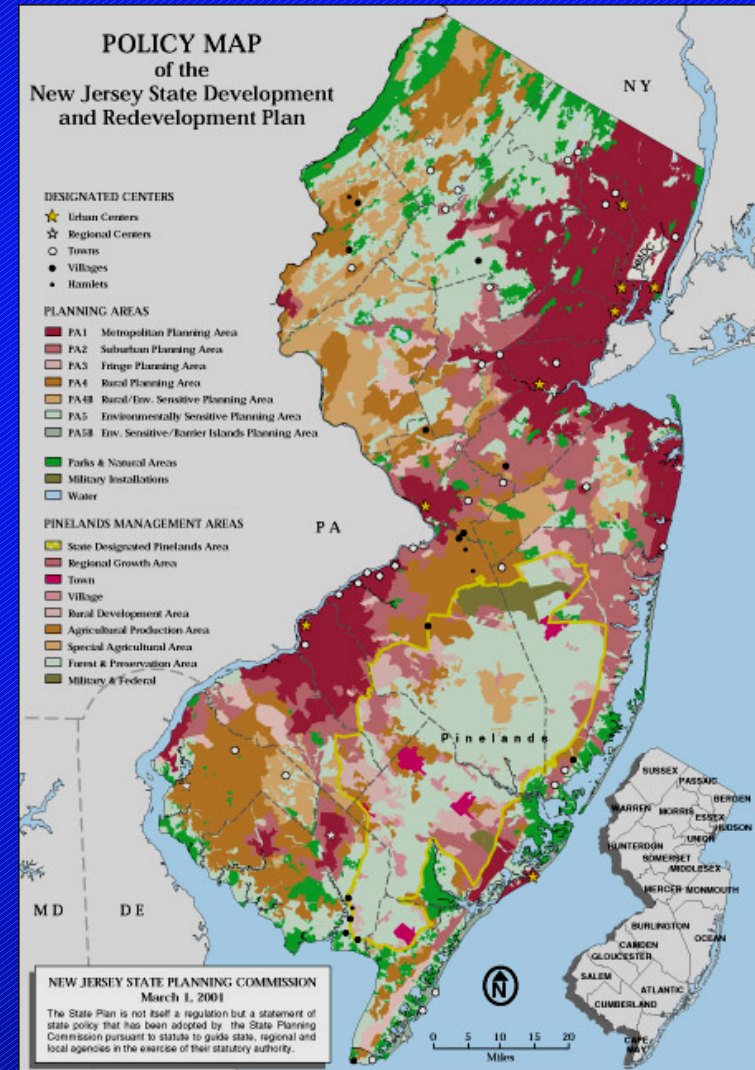


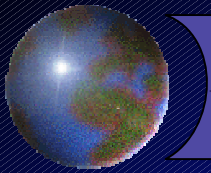


# Project Goals

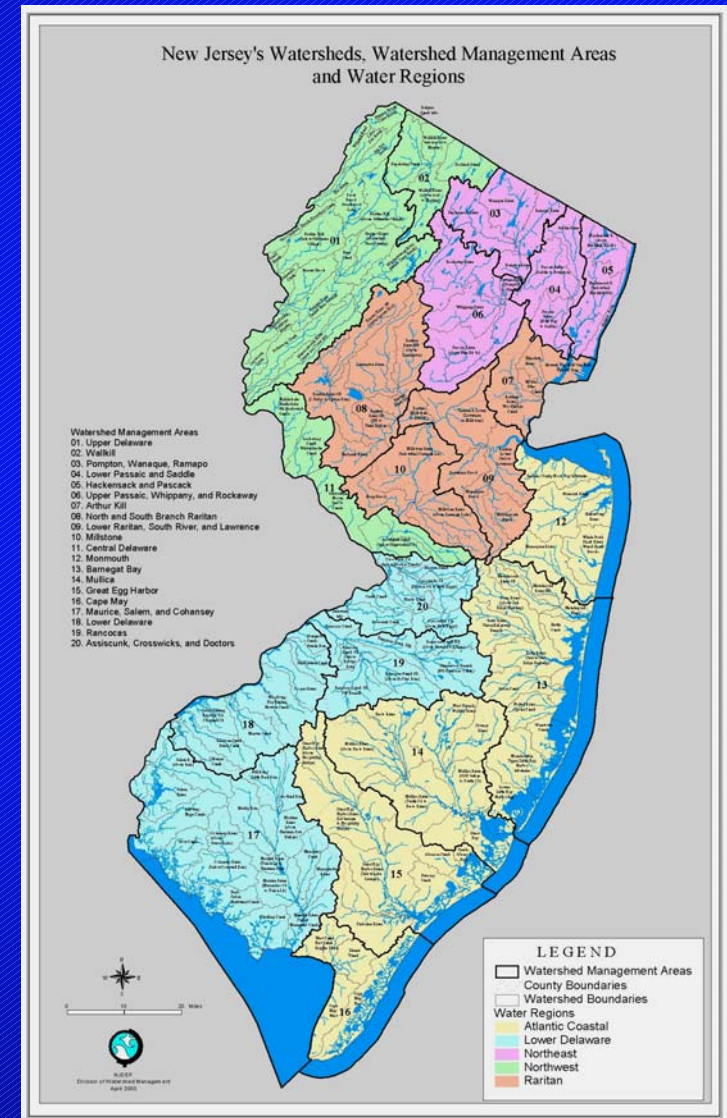
## 1. Coordinate Farmland Preservation / Agricultural Retention Efforts with Proactive Planning

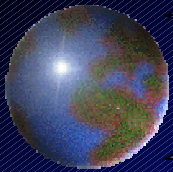
- ❖ NJ Department of Agriculture Agricultural Smart Growth Plan
- ❖ State Development and Redevelopment Plan
- ❖ County and Municipal Master Plans and Development Regulations





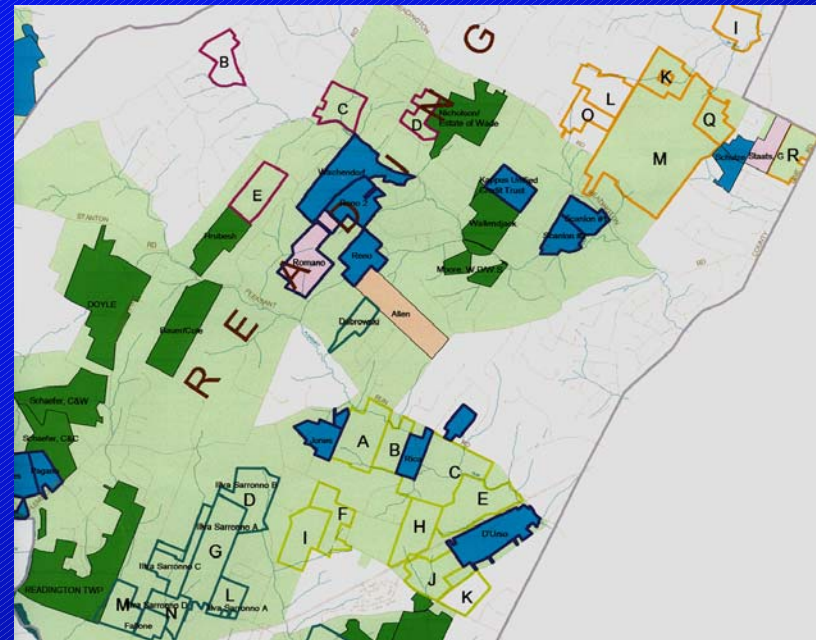
- ❖ Infrastructure Investments
- ❖ Provide Reliable Information to Land Owners and Developers
- ❖ Support Strategies Transcending Political Borders
- ❖ Incorporate Geographic Information System (GIS) Technology



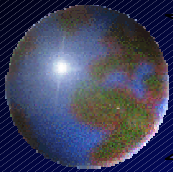


## 2. *Update / Create Maps Used to Target Farmland Preservation Efforts*

- ❖ **Agricultural Development Areas (ADAs)**
  - ❖ CADB Statutory Responsibility
  
- ❖ **Easement Purchase Target / Priority Areas**
  
- ❖ **Planning Incentive Grant Project Areas**
  
- ❖ **Coordinate with 1, 5 and 10 Year Preservation Acreage Targets**

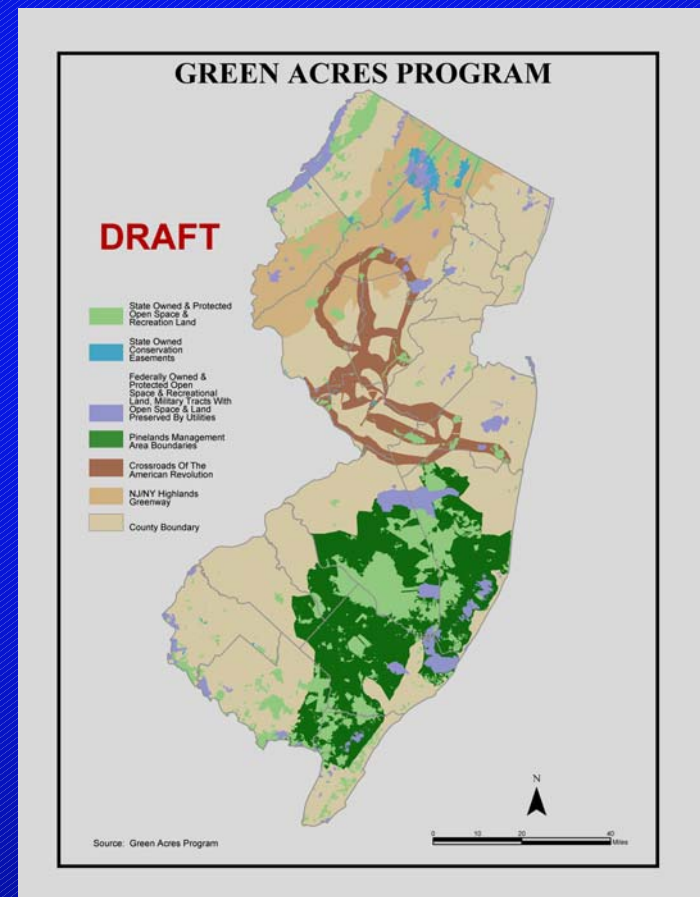




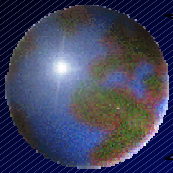


### 3. *Coordinate Farmland Preservation Efforts with Open Space, Recreation and Historic Preservation Investments*

- ❖ Greenways, Greenbelts and Viewsheds
- ❖ Trails
- ❖ Environmentally Significant Corridors
- ❖ Cultural Landscape Protection



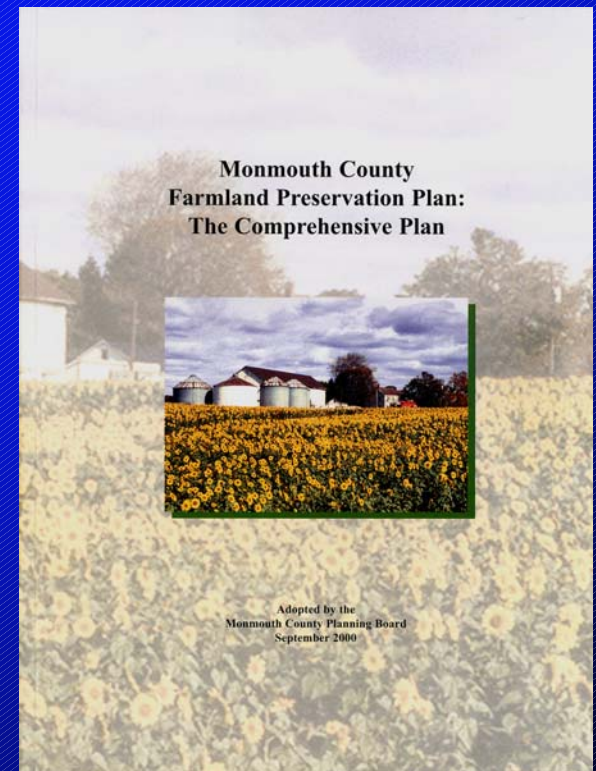


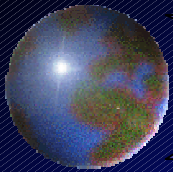


# *Progress to Date*

## 1. County Comprehensive Farmland Preservation Plans

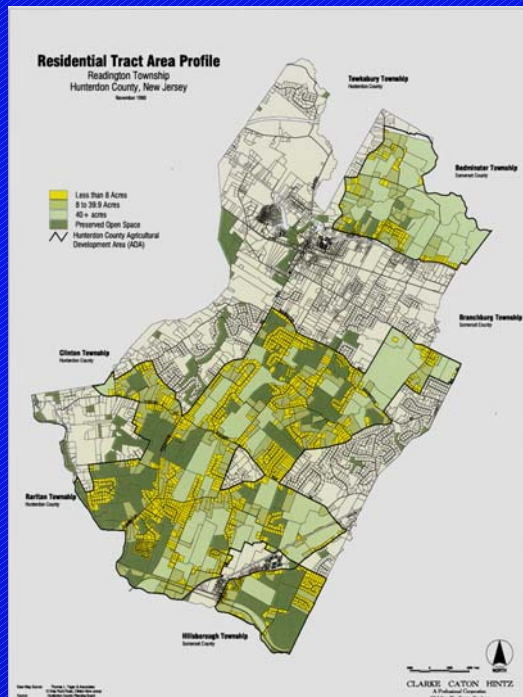
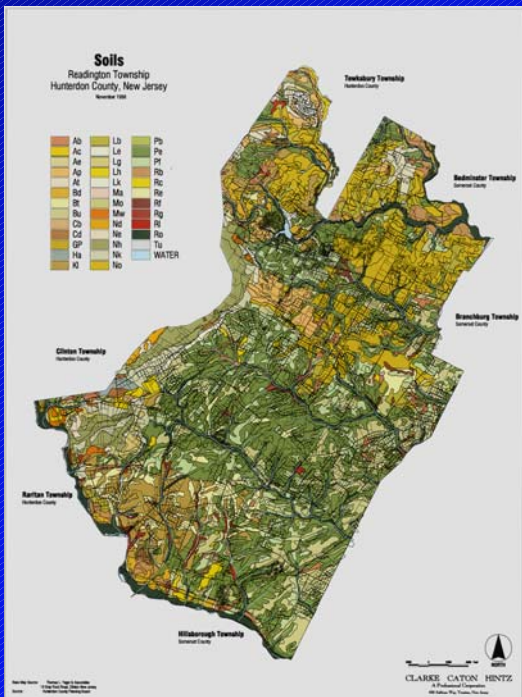
- ❖ 10 County Comprehensive Farmland Preservation Plans Adopted
- ❖ 2 Comprehensive Plans in Progress
- ❖ 3 Strategic / Long-Range / Growth Management Plans Adopted





## 2. Planning Incentive Grants (PIGs)

- ❖ 10 County Plans Approved or in Progress
- ❖ 45 Municipal Farmland Preservation Master Plan Elements Adopted



### Amendment to the Master Plan TOWNSHIP OF READINGTON

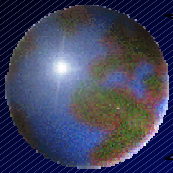


Wallendjack Farm, Pine Bank Road

PLANNING BOARD  
TOWNSHIP OF READINGTON  
HUNTERDON COUNTY, NEW JERSEY

November 23, 1998





### 3. State Development and Redevelopment Plan Adopted 3/1/01

#### ❖ Policy Map

- Planning Areas
- Centers

#### ❖ Statewide Policies

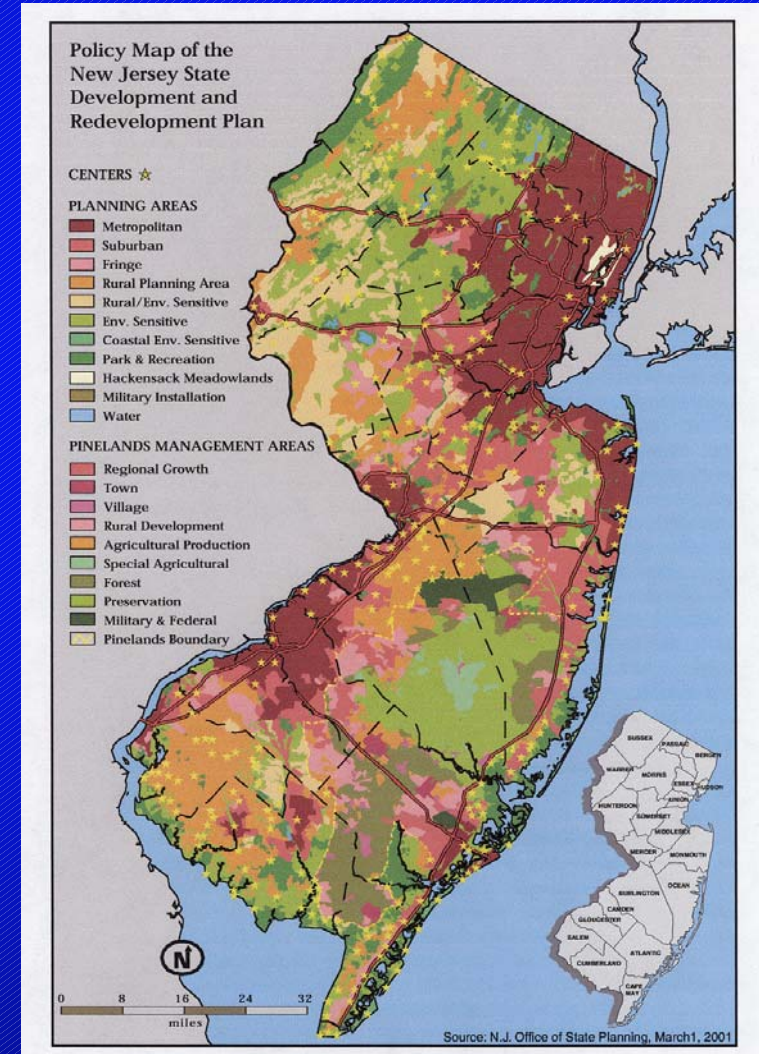
- Including Agricultural Land Retention Program Priorities

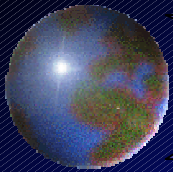
#### ❖ Sustainability Themes Throughout

- Including Sustainable Agriculture

#### ❖ Cross Acceptance III

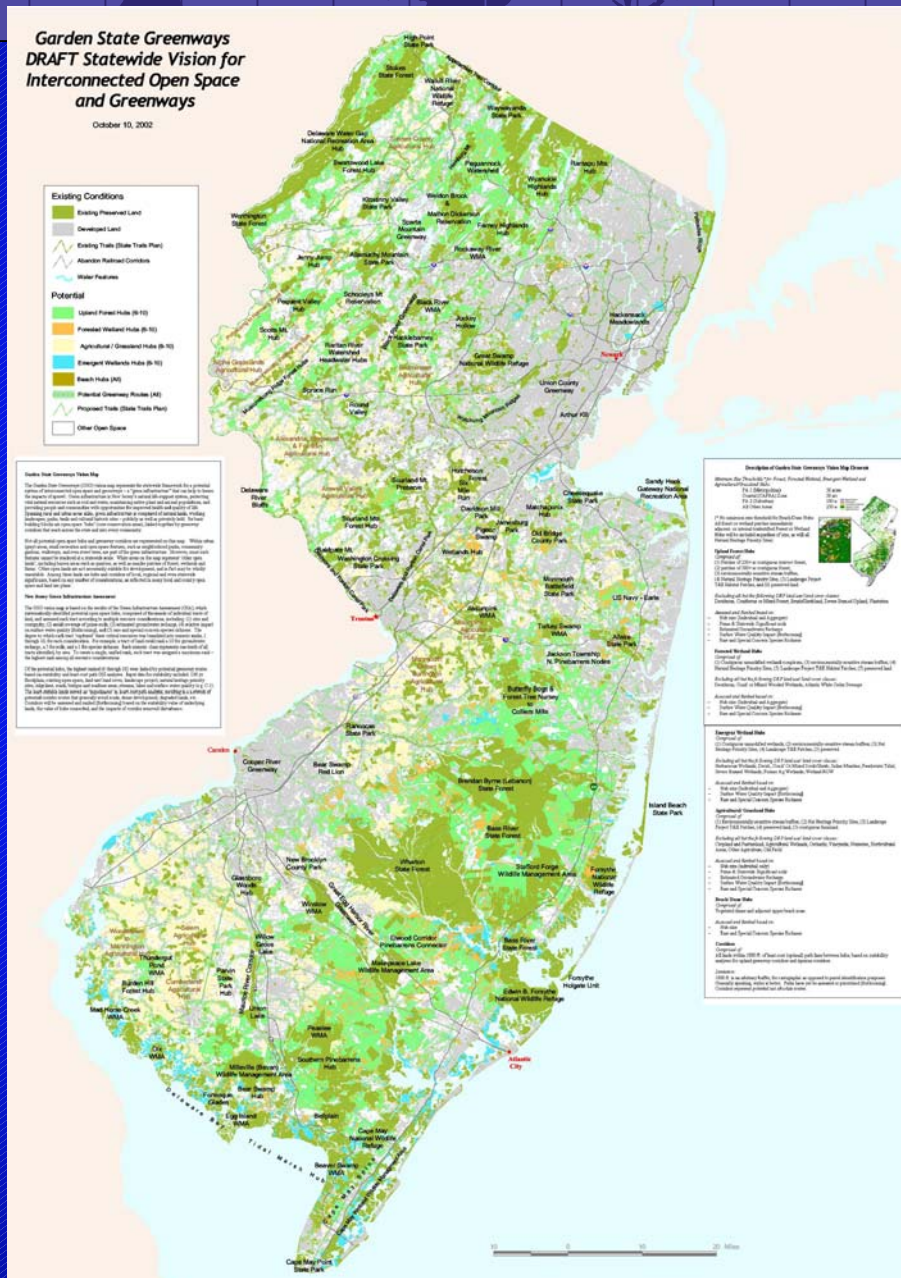
#### ❖ Plan Endorsement



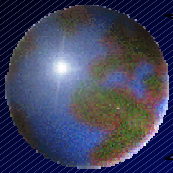


# 4. Other Significant Developments / Plans

- ❖ NJCF / NJDEP Garden State Greenways Vision
- ❖ NJ Highlands Water Protection and Planning Act
- ❖ NJDCA Smart Growth Grants
- ❖ Watershed Planning
- ❖ Crossroads of the American Revolution
- ❖ NJDEP Trails Plan







## ❖ 2000 Census Growth Trends

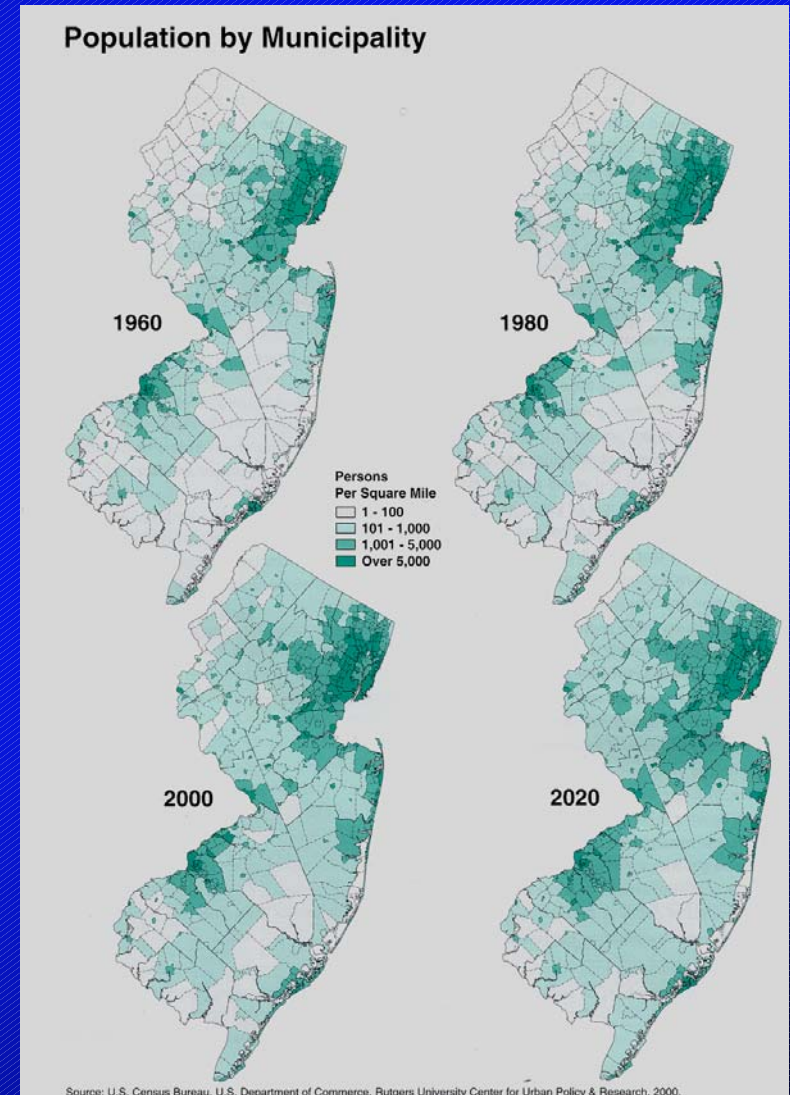
- Population
- Employment
- Housing

## ❖ GIS Data Layer Development

- Digital Soils Data
- DEP Land Use / Land Cover Data
- Sewer Service Areas

## ❖ Transportation Plans / Major Projects

- Highways
- Public Transit Corridors
- Scenic Byways
- Transit Villages




Source: U.S. Census Bureau, U.S. Department of Commerce, Rutgers University Center for Urban Policy & Research, 2000.

# Legend

 County Boundary

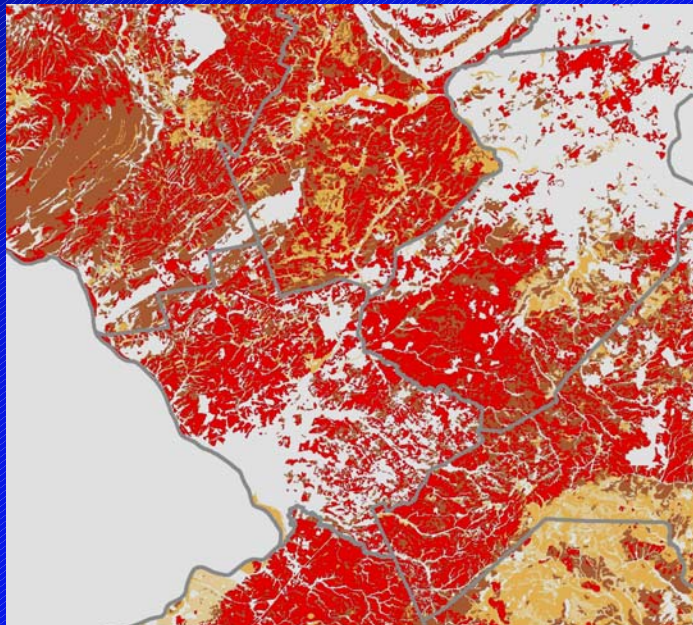
## Soil Types

 prime

 statewide

 local

 unique



# AGRICULTURAL SOIL TYPES

## DRAFT

### Legend

 County Boundary

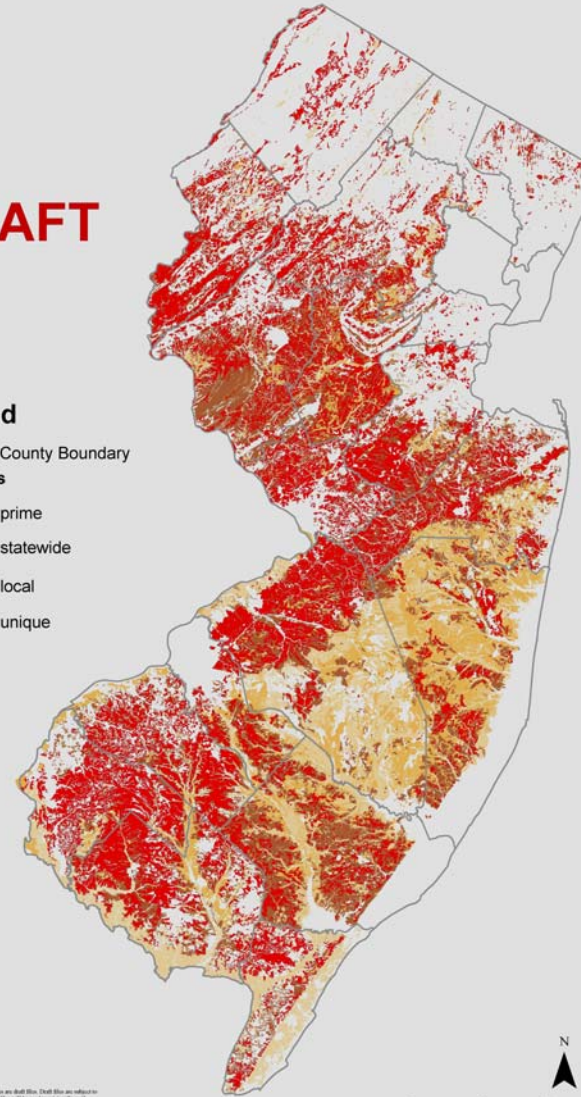
#### Soil Types

 prime

 statewide

 local

 unique









Source:  
USDA - NRCS Data Base  
New York Department of Agriculture and Markets  
Data provided by the NRCS Data Base will not be used for any purpose other than that for which it was provided.  
USDA Data Base will not be used for any purpose other than that for which it was provided.  
Data and Software provided do not have a 30% Soil Survey and Data 1987-90  
USDA Data Base for these areas.

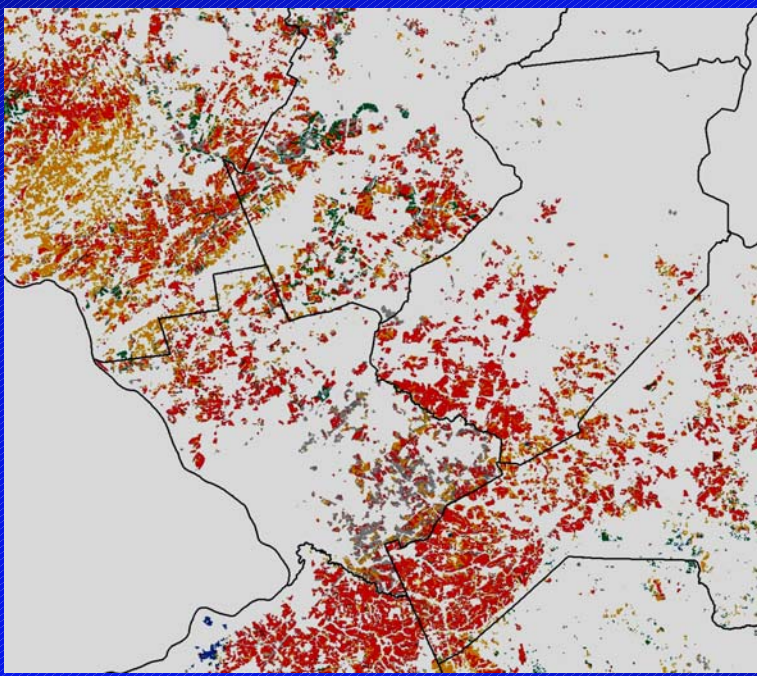


# Soil Classifications in Agricultural Landuse

 County Boundary  
 No Data Available

**Agriculture**

**Prime**   
**Statewide**   
**Local**   
**Unique**   
**Non Prime**   
**Drained** 



# LANDUSE AND SOIL CLASSIFICATIONS



**DRAFT**

No Data Exists for Hudson and Essex Counties







Notes: dated September 24, 2003  
 Comments: Version and Label Changes are both obsolete of NCI's digital soils. TSS03  
 0143 030103 030103 030103 and should not be considered as final, quality-  
 assured products. Do not distribute these datasets.  
 It is required that NCI's will certify and endorse the official contents of this data to the  
 user/agency.  
 If you have any technical questions, please contact either:  
 Rick Taylor - State Soil Scientist - NCI/CI - New Jersey  
 732.926.1171 ext. 100  
 Chris Smith - Asst. State Soil Scientist - NCI/CI - New Jersey  
 732.926.1171 ext. 100  
 If you have 100-related questions, please contact:  
 NCI's Customer Support - NCI/CI - New Jersey  
 732.926.1171 ext. 100

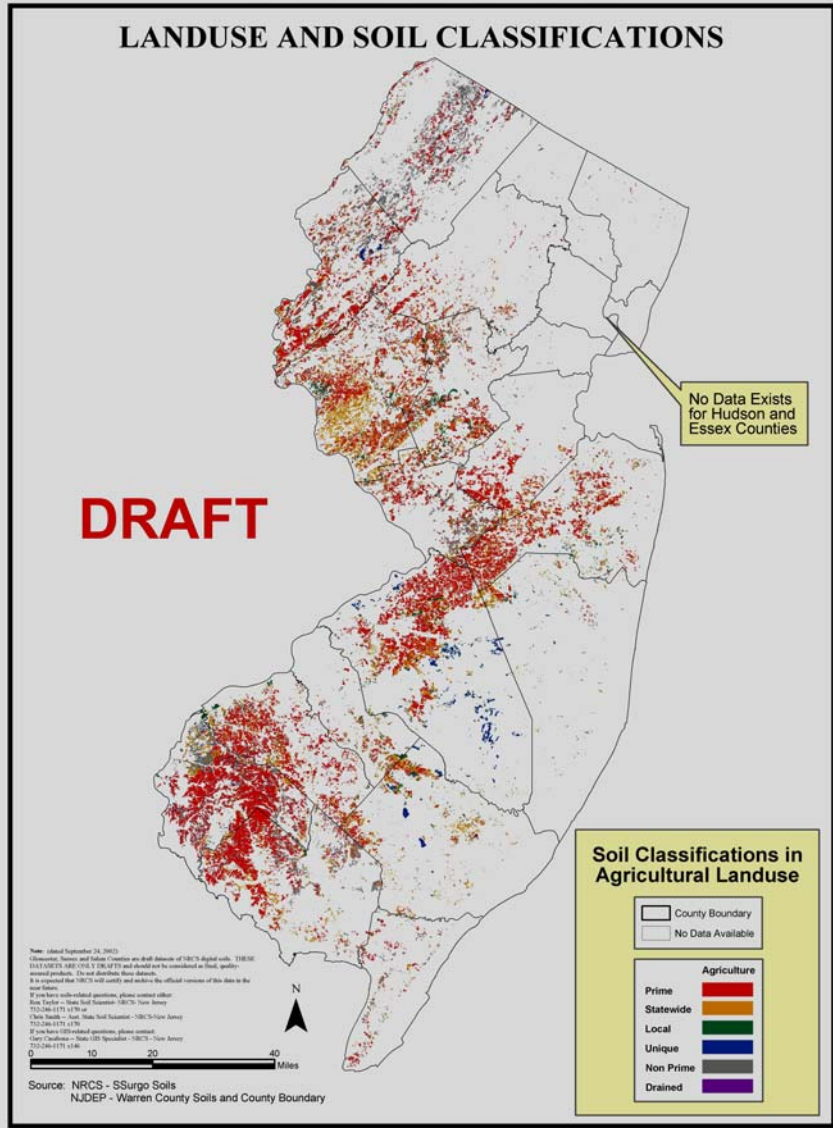
Source: NRCS - SSurgo Soils  
 NJDEP - Warren County Soils and County Boundary

## Soil Classifications in Agricultural Landuse

 County Boundary  
 No Data Available

**Agriculture**

**Prime**   
**Statewide**   
**Local**   
**Unique**   
**Non Prime**   
**Drained** 



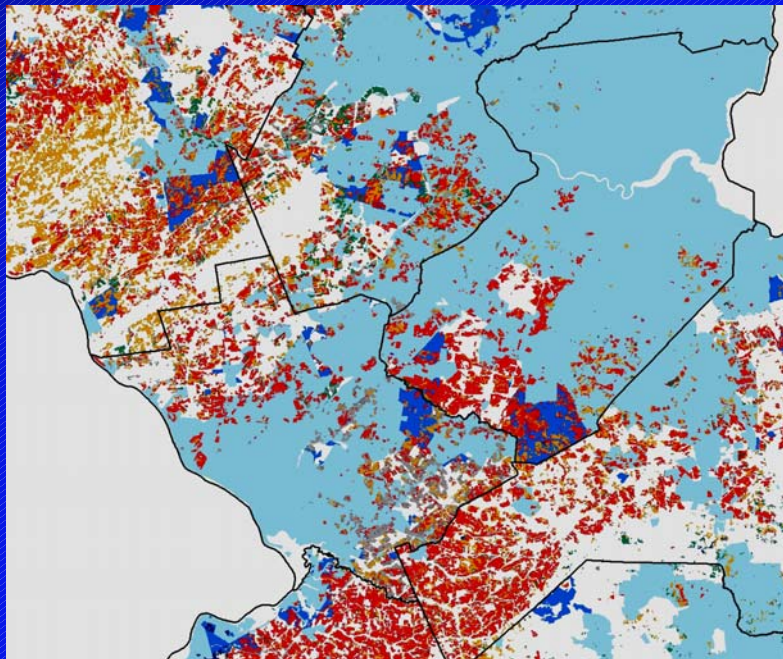
# Soil Classifications in Agricultural Landuse and Sewer Service Areas

- Prime
- Statewide
- Local
- Unique
- Non Prime
- Drained

## Sewer Types

- Existing
- Future

- County Boundary
- No Data Available



# SEWER SERVICE AREAS

## DRAFT

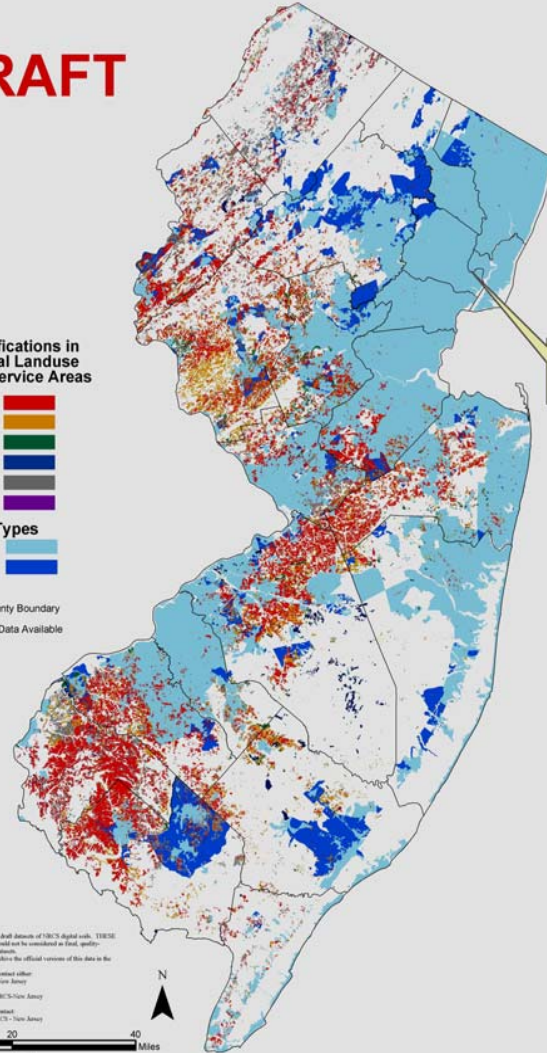
### Soil Classifications in Agricultural Landuse and Sewer Service Areas

- Prime
- Statewide
- Local
- Unique
- Non Prime
- Drained

### Sewer Types

- Existing
- Future

- County Boundary
- No Data Available



No Data Exists for Hudson and Essex Counties

Note: (dated September 24, 2002)  
 Observer, Stevens and Tolson Counties are draft datasets of 1:50,000 digital soils. 1:50,000  
 1:50,000 SOILS (1:50,000) and should not be considered as final, quality-  
 assured products. Do not distribute these datasets.  
 It is requested that 1:50,000 soil units and symbols be the official versions of this data in the  
 future.  
 If you have any technical questions, please contact either:  
 Data Support - State Soil Inventory - 18075 New Jersey  
 1702-964-1171 or  
 Data Support - Acid State Soil Inventory - 18075 New Jersey  
 1702-964-1171 or  
 If you have any technical questions, please contact:  
 Data Support - State GIS Specialist - 18075 New Jersey  
 1702-964-1171 or


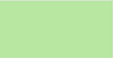




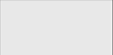
Source: NRCS - SSurgo Soils  
 NJDEP - Warren County Soils and County Boundary  
 NJOSP - Sewer Service Areas

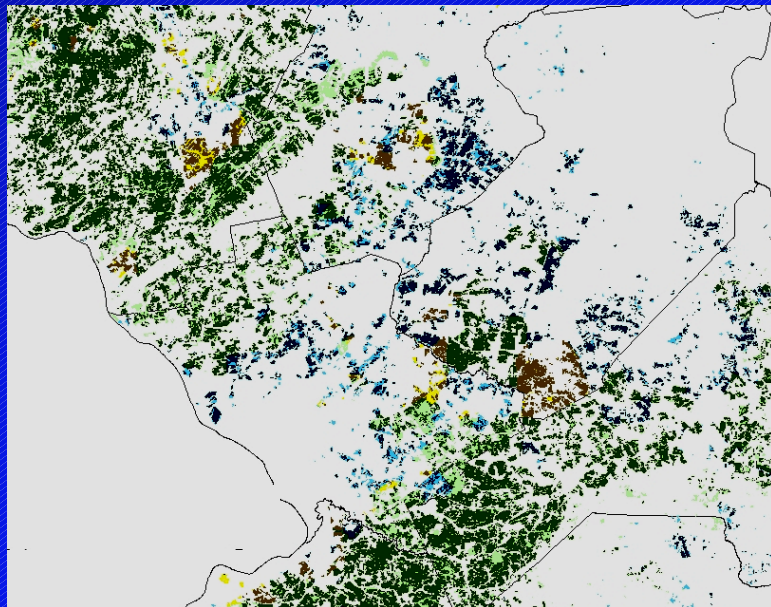


**DRAFT**

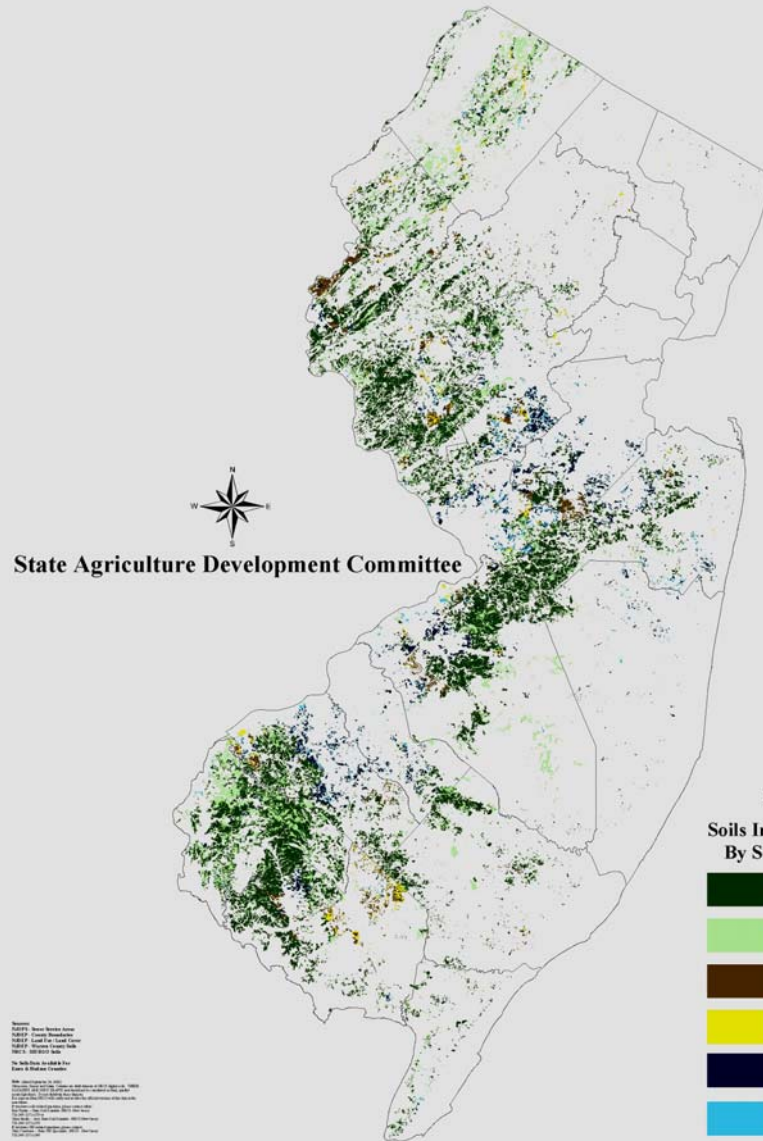
February 2003

### Soils In Active Agriculture By Sewer Service Area

-  Prime & Statewide Soils  
Non-Sewer Service
-  Other Soils  
Non-Sewer Service
-  Prime & Statewide Soils  
Future Sewer Service
-  Other Soils  
Future Sewer Service
-  Prime & Statewide Soils  
Existing Sewer Service
-  Other Soils  
Existing Sewer Service
-  County Boundaries



## Farmland Preservation Priorities



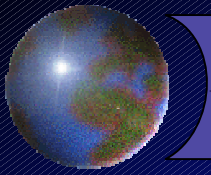
State Agriculture Development Committee



**DRAFT**  
February 2003

### Soils In Active Agriculture By Sewer Service Area

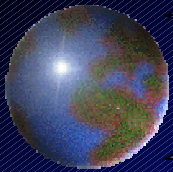
-  Prime & Statewide Soils  
Non-Sewer Service
-  Other Soils  
Non-Sewer Service
-  Prime & Statewide Soils  
Future Sewer Service
-  Other Soils  
Future Sewer Service
-  Prime & Statewide Soils  
Existing Sewer Service
-  Other Soils  
Existing Sewer Service
-  County Boundaries



# *Preliminary Analysis*

- ❖ 9,924 Farms / 805,682 Acres in NJ
- ❖ Average NJ Farm Size: 81 Acres
- ❖ Median Farm Size: 22 Acres
- ❖ 70.5% of NJ Farms less than 50 Acres
- ❖ 17.0% of NJ Land Area in Farms
- ❖ 41.0% of NJ Prime Soils in Ag Use
- ❖ 17.8% of NJ Farmland Preserved

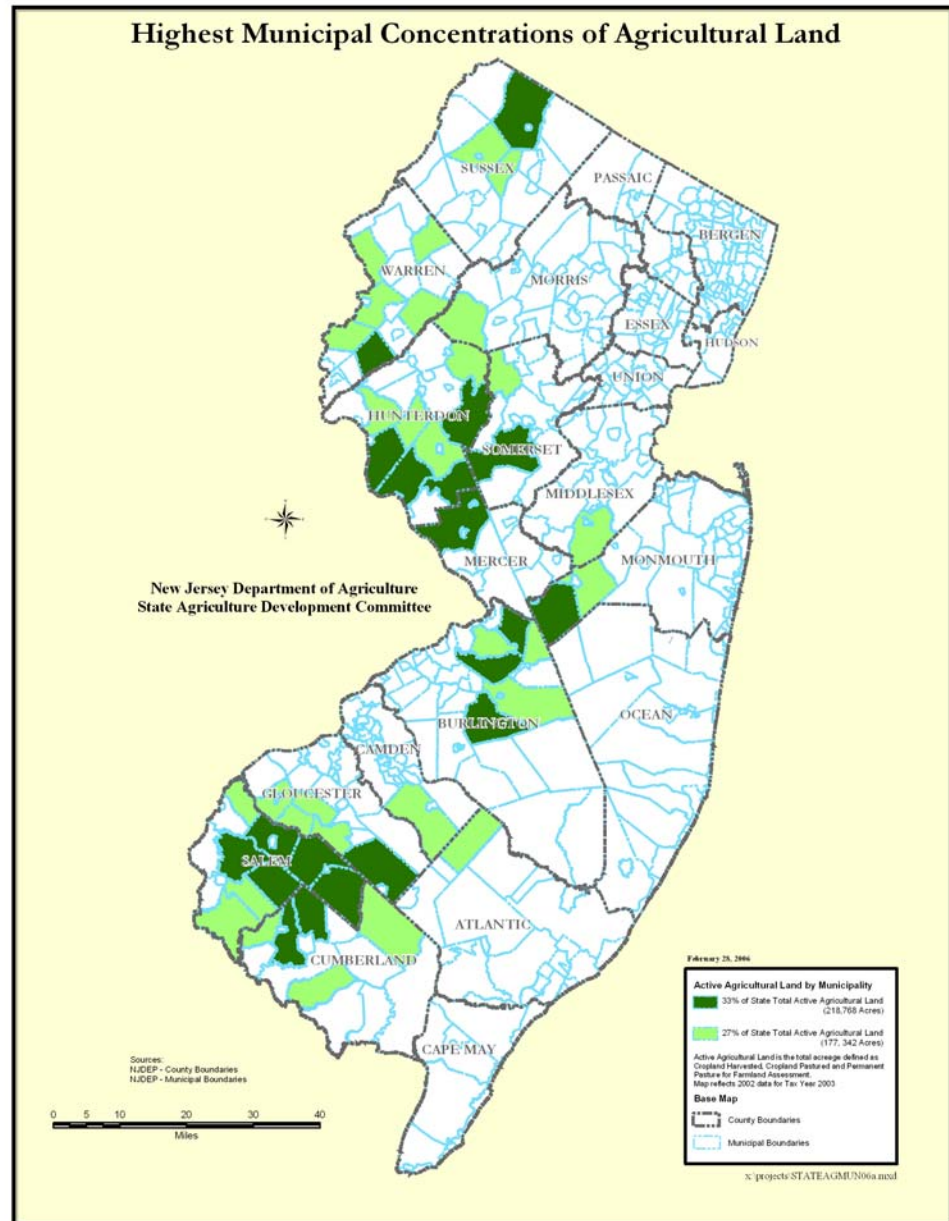




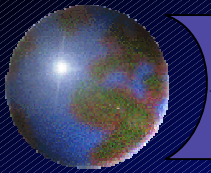
## Top 50 Municipalities

- ❖ 33% of NJ's Cropland Harvested, Cropland Pastured and Permanent Pasture is located in 20 Municipalities
- ❖ Another 27% of the State's Active Agricultural Land is located in the next 30 Municipalities

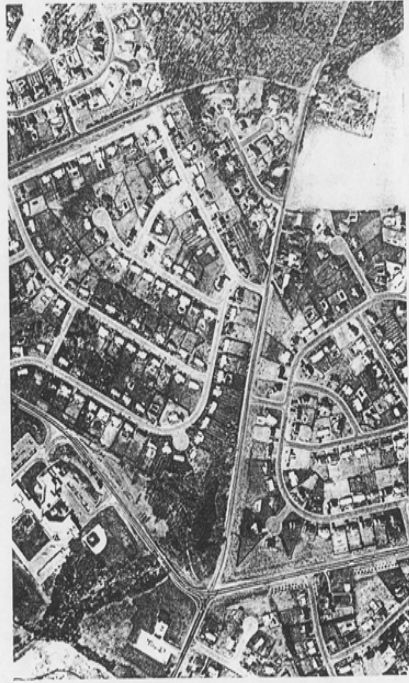
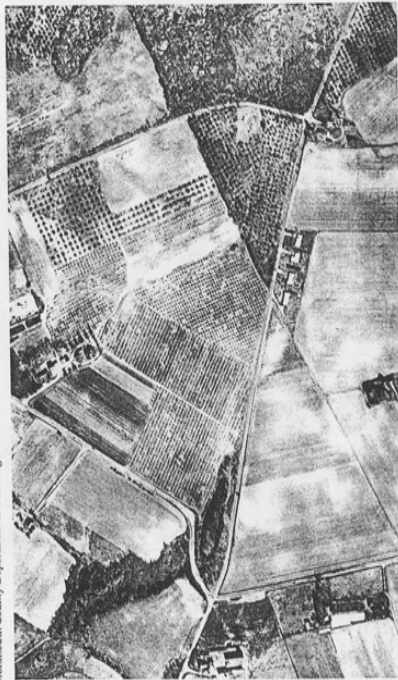
Highest Municipal Concentrations of Agricultural Land







# Why Plan for Agriculture?



Monmouth County Department of Planning

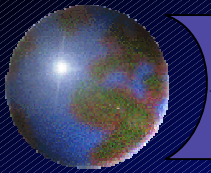
Aerial photographs of the Route 520/Wyncrest Road area of Marlboro Township taken in 1974 and 1990 show how dramatically Monmouth County has changed since the last complete open space plan was adopted in 1970.

1974

1990

- ❖ Critical Crossroad:  
Losing 8,000 to 10,000 acres per year but preserving 15,000 to 20,000 acres per year
- ❖ Need to Proactively Plan for the Agricultural Industry as we Preserve Farmland.





# *Innovative Conservation Planning*



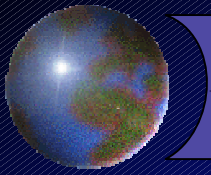
Existing



Trend



Plan

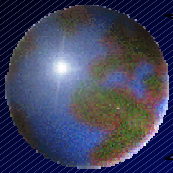


# *Innovative Conservation Planning*

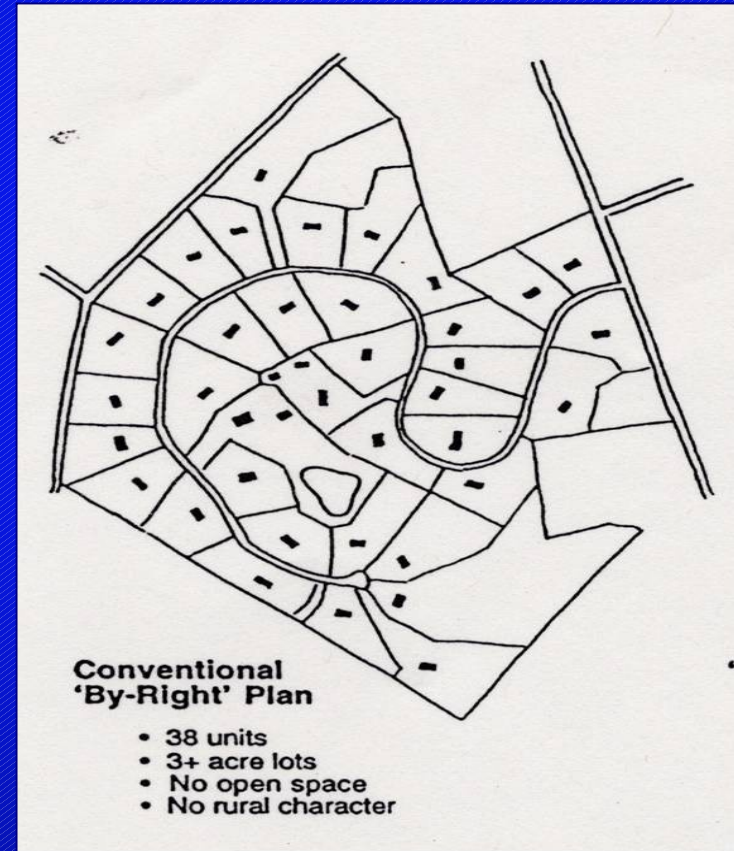
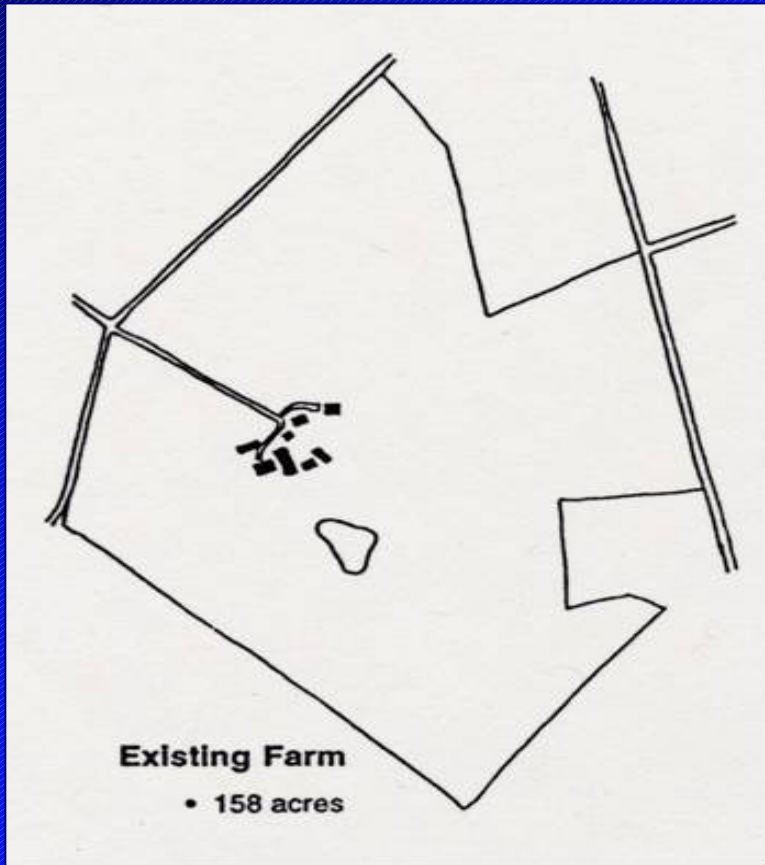
- ❖ Integrate Growth Planning with Preservation Planning
- ❖ Employ Innovative Conservation Planning Techniques

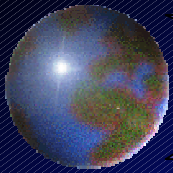




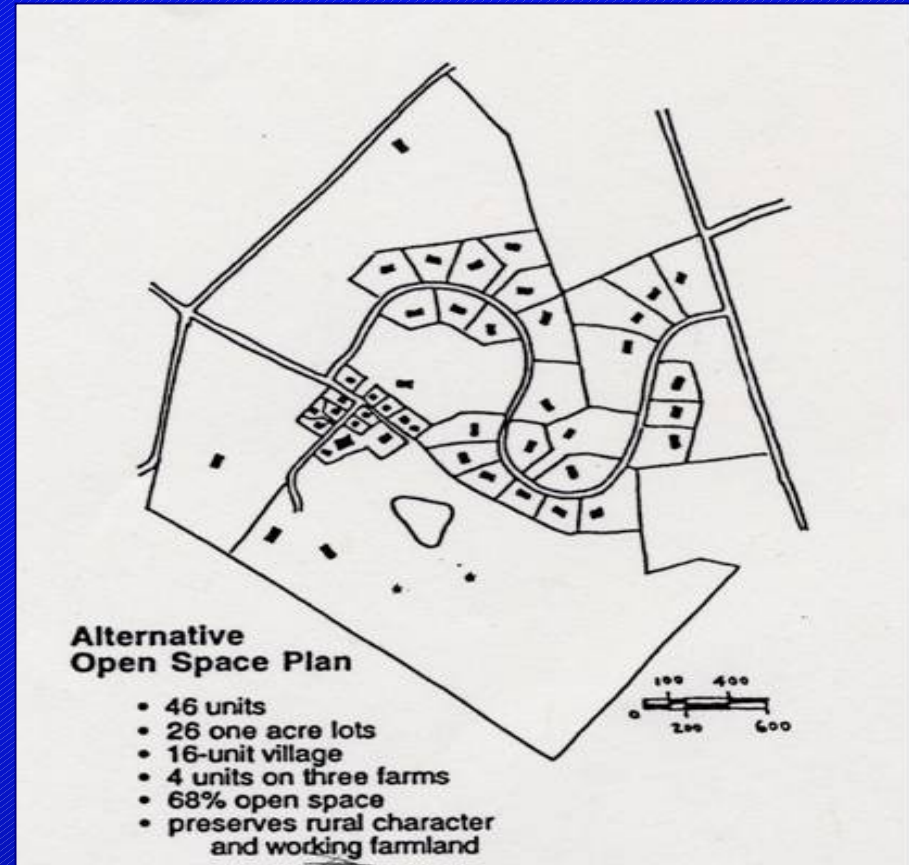
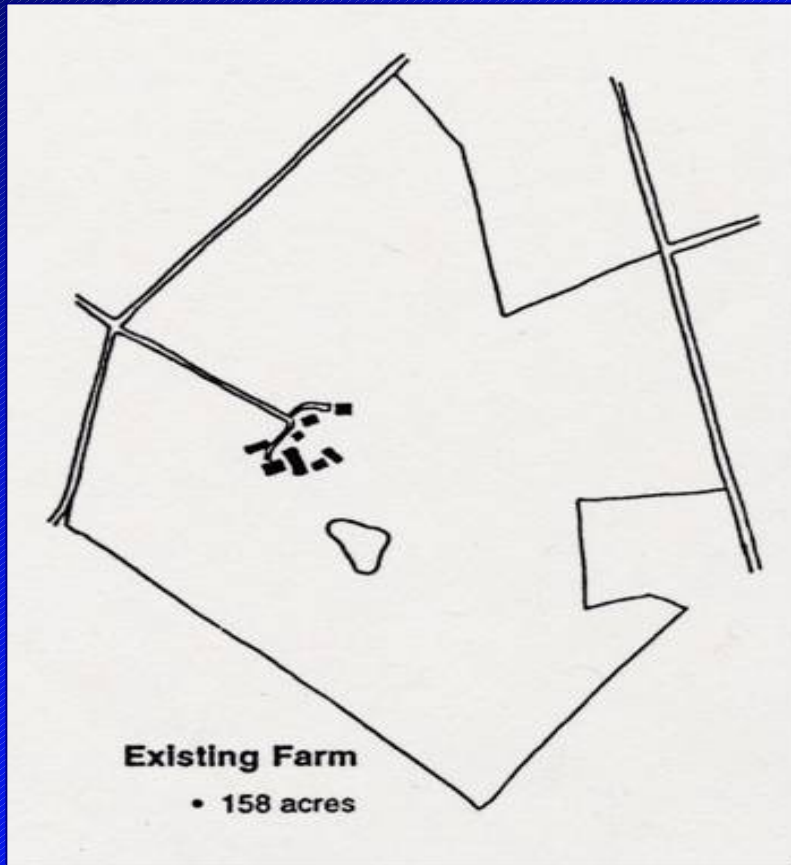


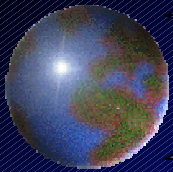
# *Conventional Subdivision*





# Clustering





# Conservation Zoning / Subdivision

## Growing Greener Conservation by Design



Communities across Pennsylvania are realizing that they can conserve their special open spaces, greenways and natural resources at the same time they achieve their development objectives. How? Conservation through local zoning and subdivision ordinances, an approach we're calling Growing Greener: Conservation by Design. If you want your community to take control of its destiny and ensure that new development creates more livable communities in the process, the Growing Greener: Conservation by Design approach might be right for you.



**Figure 6 YIELD PLAN**

The kind of subdivision most frequently created in Pennsylvania is the type which blankets the development parcel with house lots, and which pays little if any attention to designing around the special features of the property. In this example, the house placement avoids the primary conservation areas, but disregards the secondary conservation features. However, such a sketch can provide a useful estimate of a site's capacity to accommodate new houses at the base density allowed under zoning—and is therefore known as a "Yield Plan."



**Figure 7 OPTION 1**

Density-neutral with Pre-existing Zoning  
18 Lots  
Lot Size Range: 20,000 to 40,000 sq. ft.  
50% undivided open space



**Figure 8**

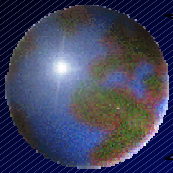
**OPTION 2**  
Enhanced Conservation and Density  
24 Lots  
Lot Size Range: 12,000 to 24,000 sq. ft.  
60% undivided open space



**Figure 9**

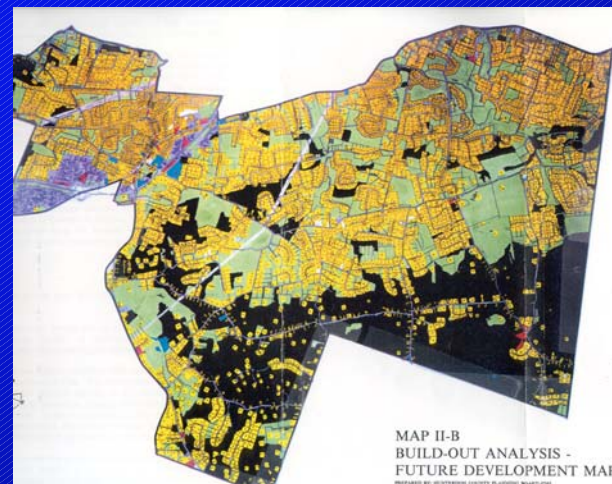
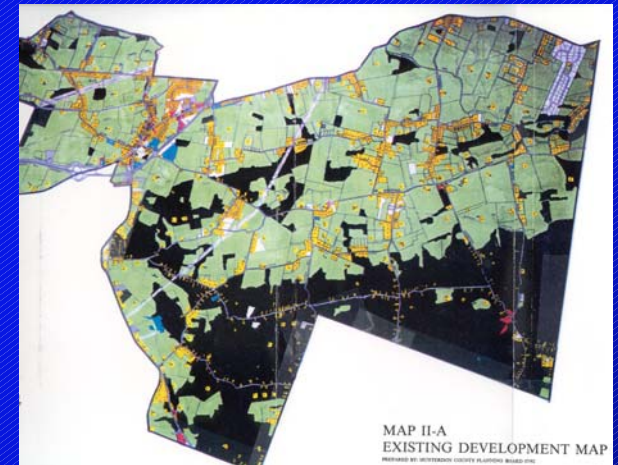
**OPTION 3**  
50% Density Reduction  
9 Lots  
Typical Lot Size: 160,000 sq. ft. (4 acres)  
Estate Lots

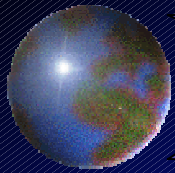




# Use Existing Planning Tools

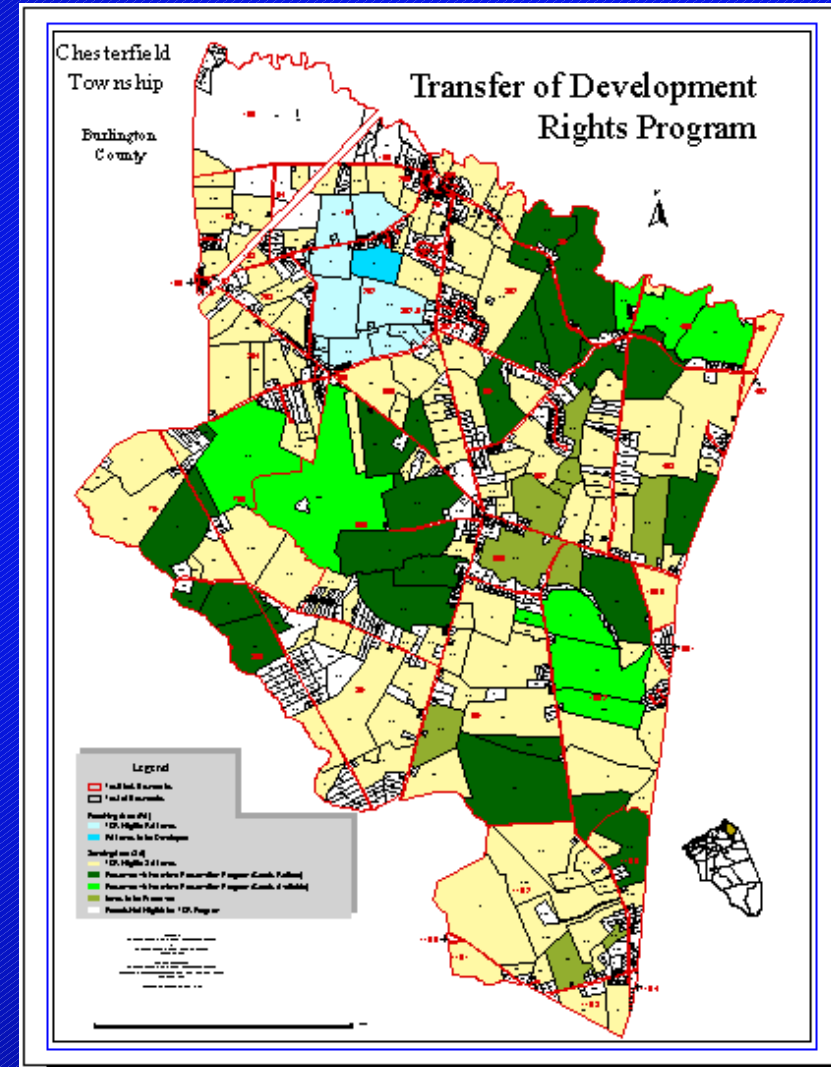
- ❖ Build Out Analysis
- ❖ Capacity Analysis
- ❖ Land Use Ordinances
- ❖ Ag-Friendly Ordinances

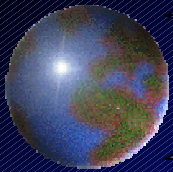




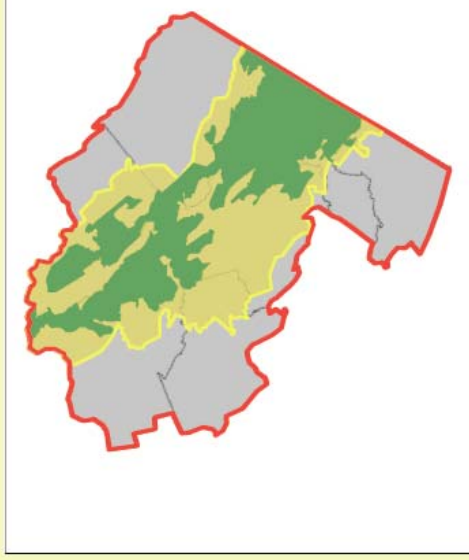
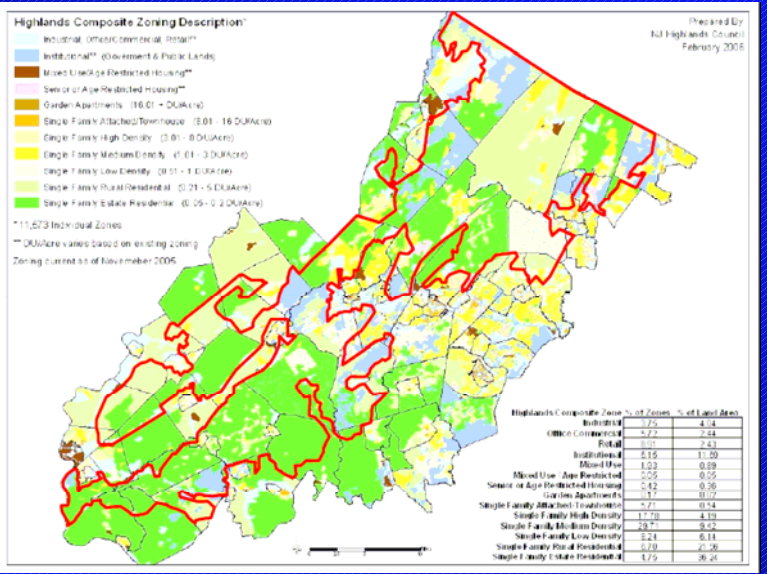
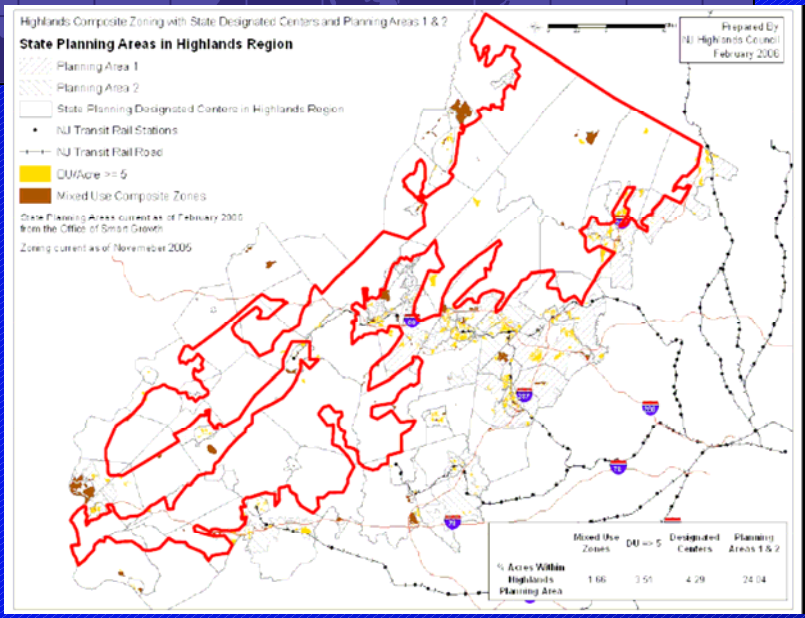
# Promote Use of New Techniques to Accommodate Growth & Protect Viable Farmland

- ❖ Transfer of Development Rights
- ❖ Alternative Waste Water Treatment Systems



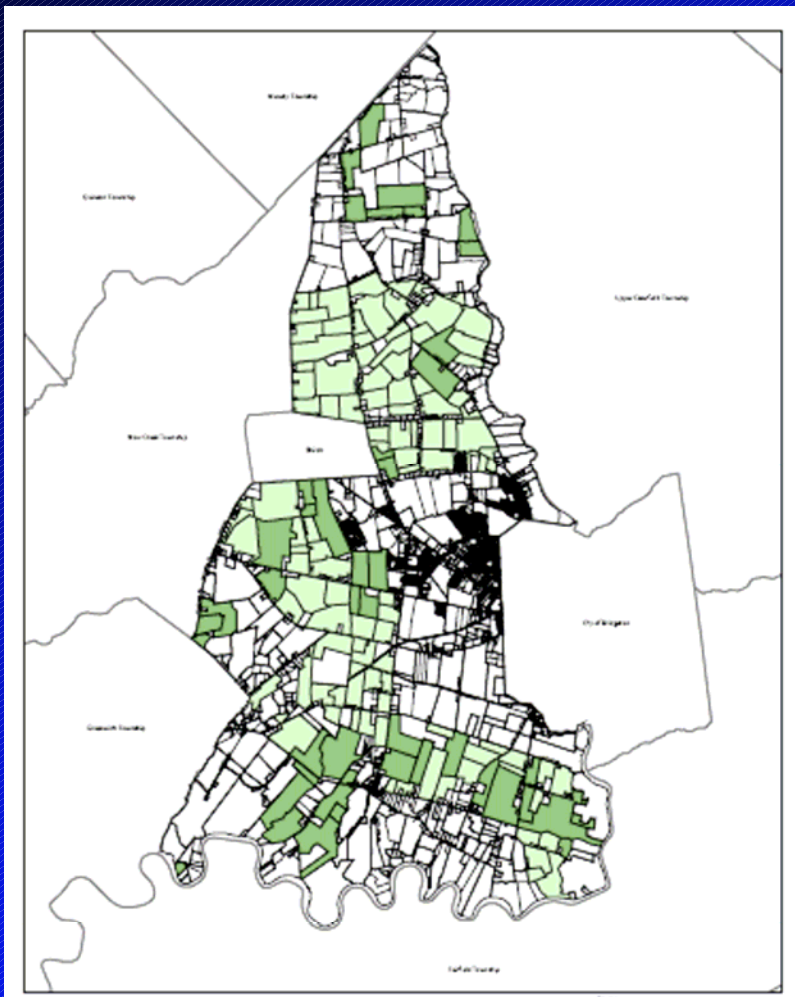
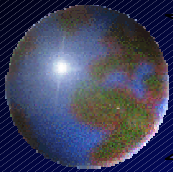


- ## Highlands TDR Program Objectives
- Preservation of ecologically, agriculturally, historically or culturally important lands of the Highlands Region
  - Ensure landowner equity for those properties impacted by Highlands Act



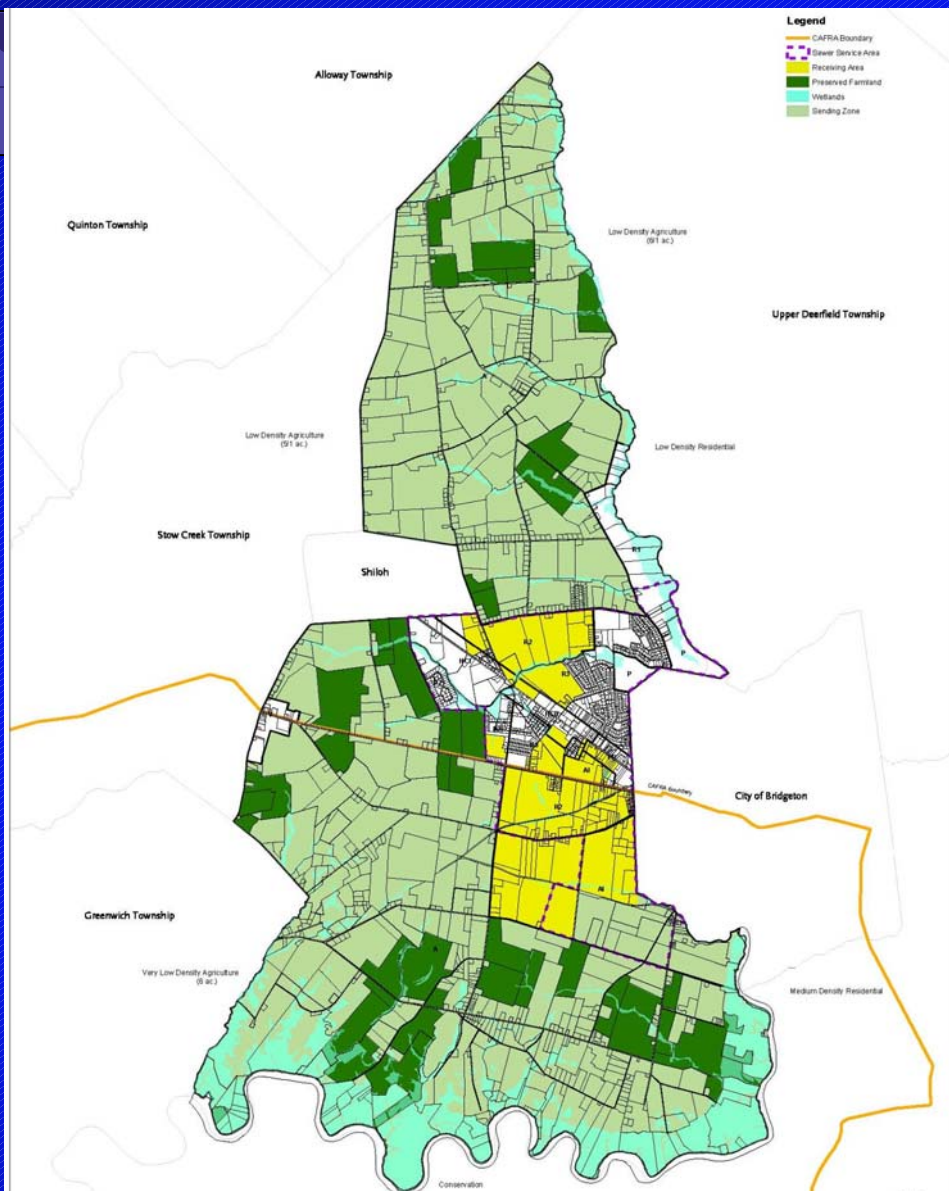
- ## Voluntary TDR Receiving Zone
- ### Seven Highlands Counties
- Bergen = 145,634 acres
  - Hunterdon = 214,964
  - Morris = 187,029
  - Passaic = 47,968
  - Somerset = 194,093
  - Sussex = 272,063
  - Warren = 165,047
  - TOTAL = 1,226,798 acres**
- 213 Qualifying Municipalities**





DRAFT  
**PIG Target Area**  
 Hopewell Township, Cumberland County, NC May 2009

Clarke-Caton Hintz  
 Architects  
 Planners  
 Landscape Architects



- Legend**
- CAFTA Boundary
  - Sewer Service Area
  - Receiving Area
  - Preserved Farmland
  - Wetlands
  - Sending Zone

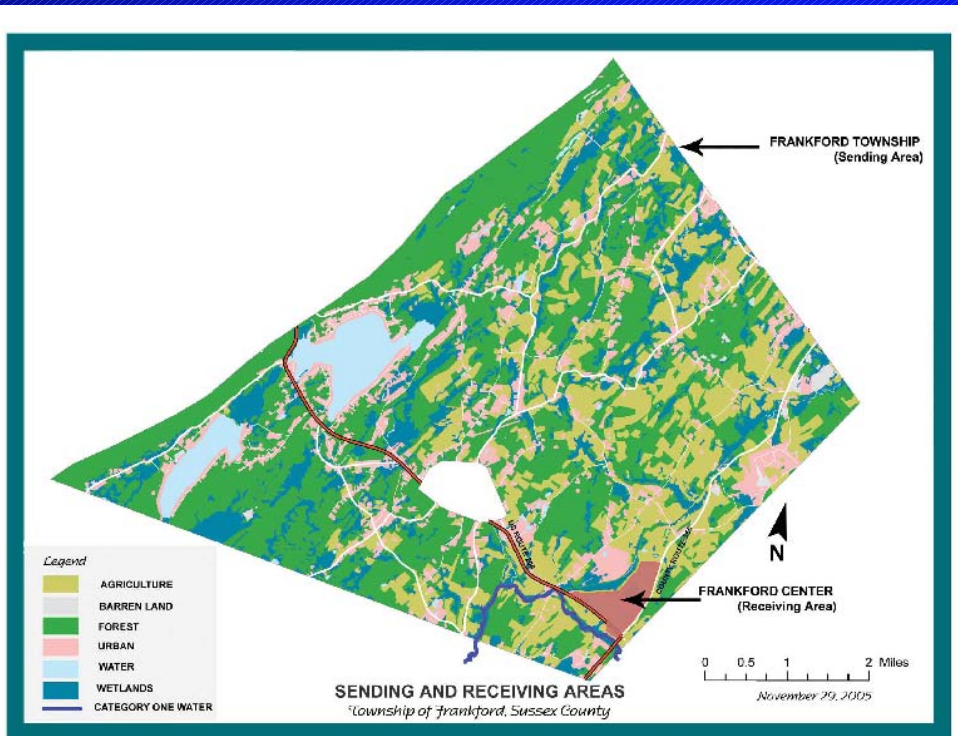
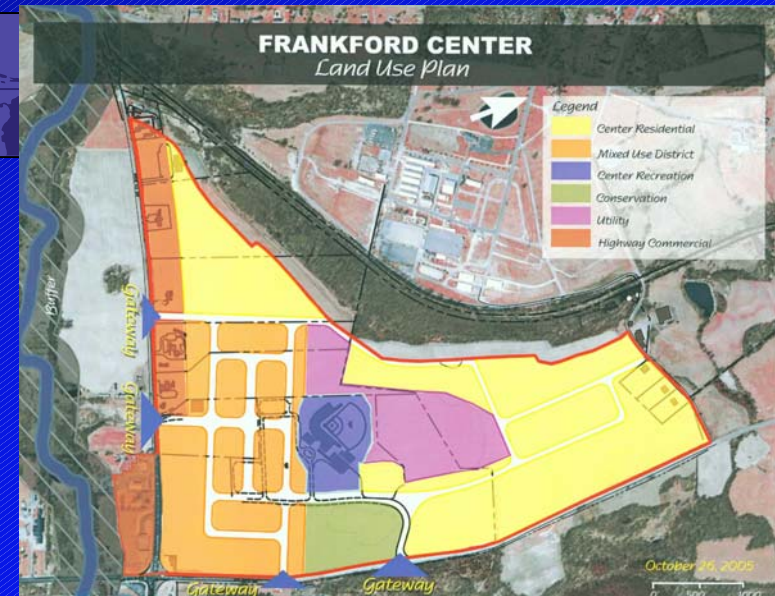
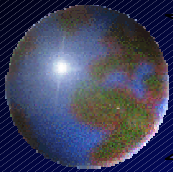


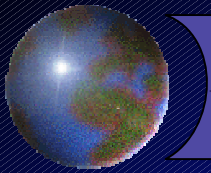
Source: Cumberland County GIS Department  
 Base Map Source: Civil Solutions, May, 2009.

DRAFT CUMBERLAND COUNTY  
**Hopewell TDR Map**  
 Hopewell Township, Cumberland County, NC October 2009

Clarke-Caton Hintz  
 Architects  
 Planners  
 Landscape Architects





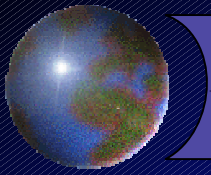


# *Municipal Role in Farmland Preservation and Ag Retention*

- ❖ Establish an Agricultural Advisory Committee
  - ❖ 3 to 5 Members
  - ❖ Report to the Planning Board
  - ❖ Majority must be Actively Engaged in Farming their own Land



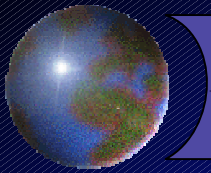




# *Municipal Role in Farmland Preservation and Ag Retention*

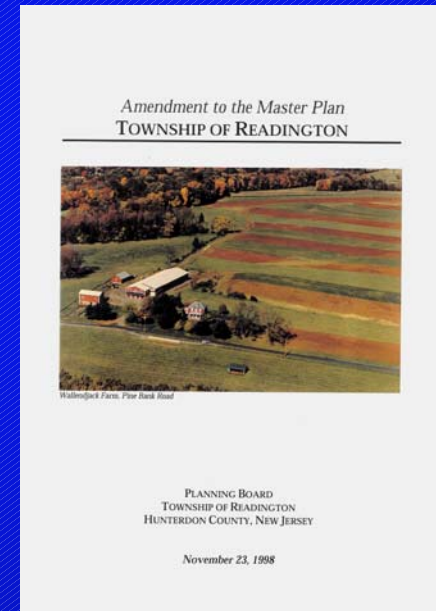
- ❖ Establish and Maintain a Dedicated Source of Funding for Farmland Preservation
  - ❖ Dedicated Tax
  - ❖ Bonds
  - ❖ Annual Appropriations

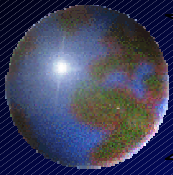




# *Municipal Role in Farmland Preservation and Ag Retention*

- ❖ Develop a Farmland Preservation Element in Your Municipal Master Plan
  - ❖ Inventory and Map Farms
  - ❖ Review Plans and Ordinances to Determine Level of Support for Agriculture as a Business
  - ❖ Develop Farm Preservation Strategy
  - ❖ Discuss Farming Trends
  - ❖ Develop Agricultural Economic Development Plans





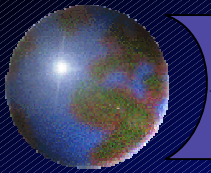
# *Municipal Role*



- ❖ Establish and Support a Right to Farm Ordinance
- ❖ Survey Farmers and Ag-Related Businesses
- ❖ Assist Farmers in Direct Marketing
- ❖ Promote Agri-Tourism
- ❖ Sponsor Agricultural Education Forums

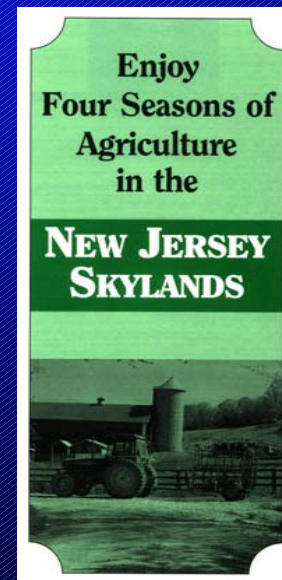
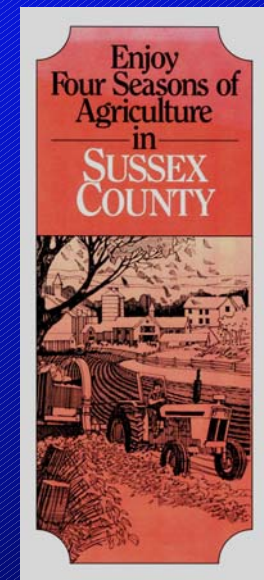


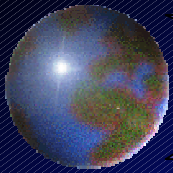




# *CADB Responsibilities*

- ❖ Develop Ag Retention and Development Programs
- ❖ Develop Minimum Program Standards
- ❖ Review, Approve & Coordinate Applications
- ❖ Delineate Agricultural Development Areas
- ❖ Monitor and Enforce Restrictions
- ❖ Make Recommendations on Issues that Threaten Ag Viability and Farmland Preservation Programs
- ❖ Require an Ag Impact Statement on Any Non-Ag Development in an ADA





# CADB Responsibilities

- ❖ Develop an Educational and Informational Programs on Farmland Preservation Techniques and Recommended Ag Management Practices
- ❖ Provide Assistance to Farm Operators Concerning State Permit Applications and Regulations
- ❖ Outreach to Landowners
- ❖ Program Promotion
- ❖ Adapt Ag Retention Program to Local Conditions
- ❖ Regional Coordination of Municipal Efforts
- ❖ Resolution and Avoidance of Right to Farm Conflicts



**AGRICULTURE STATISTICS**  
County Population: 884,118  
Full-Time Operators: 49  
Part-Time Operators: 42  
Approximate Number of farms: 91  
Total Area Acres in County: 157,439.3  
Bergen County Agricultural Land Use Assessment:  
1,050 acres or .006% of County Land Area

**RUTGERS COOPERATIVE  
EXTENSION SERVICE**  
The Bergen County Rutgers Cooperative Extension Service (BCRCES), headed by County Extension Agent Joel Flagler, helps residents on issues and needs relating to agriculture and the environment; food safety and quality; and youth development through their 4-H programs.

Through meetings, workshops, conferences and publications, BCRCES reaches residents through combined efforts of professionals and volunteers.

A wide array of services are provided such as the volunteer-trained Master Gardeners Program and agriculture and consumer services, including soil testing, identification of insects and leaf diseases, and publications on a variety of topics. They can be reached at 201-336-6780 and [www.rce.rutgers.edu/county/bergen](http://www.rce.rutgers.edu/county/bergen).

**BERGEN FRESH PRODUCTS**  
Bergen Fresh products can be found in community farmers' markets, roadside markets, supermarkets, garden centers and nurseries. Also visit the Jersey Fresh website, [www.state.nj.us/jerseyfresh](http://www.state.nj.us/jerseyfresh).



**COUNTY OF BERGEN**  
One Bergen County Plaza  
Hackensack, NJ 07601-7076

**DENNIS MCNERNEY**  
County Executive

AND THE BOARD OF CHOSEN FREEHOLDERS

Department of  
Planning & Economic Development



**BERGEN COUNTY AGRICULTURE  
DEVELOPMENT BOARD**

**Robert A. Akhatomarco**  
Executive Director

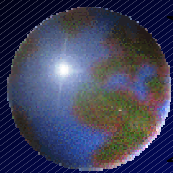
Phone: 201-336-6442  
[www.co.bergen.nj.us/planning](http://www.co.bergen.nj.us/planning)



PHOTO CREDIT: WILLIAM NEUMANN PHOTOGRAPHY

**BERGEN  
FRESH**  
*Right in your Backyard*

**DENNIS MCNERNEY,**  
Bergen County Executive and  
Local Farmer Jim Abma

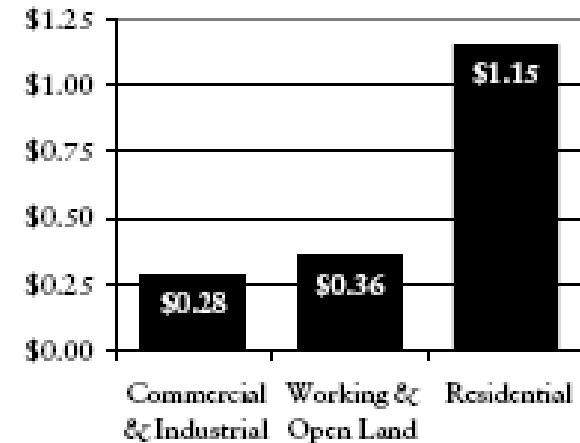


# Cost of Community Services Studies



**American Farmland Trust**  
SAVING THE LAND THAT SUSTAINS US

Median COCS Results



Median cost—per dollar of revenue raised—to provide public services to different land uses.

## SUMMARY OF COST OF COMMUNITY SERVICES STUDIES, REVENUE-TO-EXPENDITURE RATIOS

Community	Residential including farm houses	Commercial & Industrial	Working & Open Land	Source
<b>New Jersey</b>				
Freehold Township	1 : 1.51	1 : 0.17	1 : 0.33	American Farmland Trust, 1998
Holmdel Township	1 : 1.38	1 : 0.21	1 : 0.66	American Farmland Trust, 1998
Middletown Township	1 : 1.14	1 : 0.34	1 : 0.36	American Farmland Trust, 1998
Upper Freehold Township	1 : 1.18	1 : 0.20	1 : 0.35	American Farmland Trust, 1998
Wall Township	1 : 1.28	1 : 0.30	1 : 0.54	American Farmland Trust, 1998



